



State of New Jersey

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Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

7010 1870 0001 4760 7821

July 11, 2013

David Erfert, Refinery Manager
Phillips 66 Company
1400 Park Avenue
Linden, NJ 07036

Re: Final Surface Water Renewal Permit Action
Category: B - Industrial Wastewater
NJPDES Permit No. NJ0001511
PHILLIPS 66 CO
Linden City, Union County

Dear Mr. Erfert:

Enclosed is a **final** New Jersey Pollutant Discharge Elimination System (NJPDES) permit action identified above which has been issued in accordance with N.J.A.C. 7:14A. Comments were received on the draft permit issued on February 1, 2013. The thirty (30) day public comment period began on February 12, 2013 when the public notice was published in the *Star Ledger*. It ended on March 13, 2013. This permit authorizes the permittee to discharge wastewater from the operations of a petroleum refinery which includes refinery process flows, stormwater, groundwater, non-contact cooling water, cooling tower blowdown, condensate, fire-protection water, and wastewater from other analogous facilities. All discharges are routed to Morses Creek, classified as SE3 waters.

A summary of the significant and relevant comments received on the draft action during the public comment period, the Department's responses, and an explanation of any changes from the draft action have been included in the Response to Comments document attached hereto as per N.J.A.C. 7:14A-15.16.

Please note that the Limits and Monitoring Requirements Tables at Part III for DSN 003A, DSN 004A, and DSN 005A of the final permit have been revised for efficiency. The DMR and WCR tables for these three outfalls have been consolidated into one DMR and one WCR form representing all three outfalls. However, you will receive individual DMR and WCR forms for each of the three outfalls for reporting purposes.

Any requests for an adjudicatory hearing shall be submitted in writing by certified mail, or by other means which provide verification of the date of delivery to the Department, within 30 days of receipt of this Surface Water Renewal Permit Action in accordance with N.J.A.C. 7:14A-17.2. You may also request a stay of any contested permit condition, which must be justified as per N.J.A.C. 7:14A-17.6 et seq. The adjudicatory hearing request must be accompanied by a completed Adjudicatory Hearing Request Form; the stay request must be accompanied by a completed Stay Request Form. Copies of these forms can be downloaded from the Department's website at <http://www.nj.gov/dep/dwq>.

As per N.J.A.C. 7:14A-4.2(e)3, any person planning to continue discharging after the expiration date of an existing NJPDES permit shall file an application for renewal at least 180 calendar days prior to the expiration of the existing permit.

All monitoring shall be conducted in accordance with 1) the Department's "Field Sampling Procedures Manual" applicable at the time of sampling (N.J.A.C. 7:14A-6.5(b)4), and/or 2) the method approved by the Department in Part IV of the permit. The Field Sampling Procedures Manual is available at <http://www.nj.gov/dep/srp/guidance/fspm/>.

As a result of this permit action, your monitoring report forms (MRFs) have been changed and will be mailed to your current MRF recipient. Beginning the effective date of this permit action, please use the new forms. If these revised forms are not received within 2 weeks, please contact the Office of Permit Management at (609) 984-4428 for copies.

For your convenience, a schedule of submittal requirements has been included with this permit package.

Questions or comments regarding the final action should be addressed to Robert Hall at (609) 292-4860.

Sincerely,

A handwritten signature in black ink, appearing to read "Pilar Patterson", is written over a light gray rectangular background.

Pilar Patterson, Chief
Bureau of Surface Water Permitting

Enclosures

cc: Permit Distribution List
Masterfile #: 962; PI #: 46318

FACILITY SUBMITTALS

1. GDR - General Discharge Requirements

Task Description	Actual Due Date
Submit a Complete Permit Renewal Application	04/03/2018

2. B - Industrial Wastewater

Task Description	Actual Due Date
Submit a chronic methodology questionnaire	11/30/2013
Submit an Acute Whole Effluent Toxicity Test Report	01/26/2014
Submit a chronic whole effluent toxicity test report	04/26/2014
Submit an Acute Whole Effluent Toxicity Test Report	04/26/2014
Submit an Acute Whole Effluent Toxicity Test Report	07/26/2014
Dilution Study Workplan	10/01/2014
Submit a chronic whole effluent toxicity test report	10/26/2014
Submit an Acute Whole Effluent Toxicity Test Report	10/26/2014
Submit an Acute Whole Effluent Toxicity Test Report	01/26/2015
Submit a chronic whole effluent toxicity test report	04/26/2015
Submit an Acute Whole Effluent Toxicity Test Report	04/26/2015
Submit an Acute Whole Effluent Toxicity Test Report	07/26/2015
Submit a chronic whole effluent toxicity test report	10/26/2015
Submit an Acute Whole Effluent Toxicity Test Report	10/26/2015
Submit an Acute Whole Effluent Toxicity Test Report	01/26/2016
Submit the Special Report	04/01/2016
Submit a chronic whole effluent toxicity test report	04/26/2016
Submit an Acute Whole Effluent Toxicity Test Report	04/26/2016
Submit an Acute Whole Effluent Toxicity Test Report	07/26/2016
Dilution Study Final Report	10/01/2016
Submit a chronic whole effluent toxicity test report	10/26/2016
Submit an Acute Whole Effluent Toxicity Test Report	10/26/2016
Submit an Acute Whole Effluent Toxicity Test Report	01/26/2017
Submit a chronic whole effluent toxicity test report	04/26/2017
Submit an Acute Whole Effluent Toxicity Test Report	04/26/2017
Submit an Acute Whole Effluent Toxicity Test Report	07/26/2017
Submit a chronic whole effluent toxicity test report	10/26/2017
Submit an Acute Whole Effluent Toxicity Test Report	10/26/2017
Submit an Acute Whole Effluent Toxicity Test Report	01/26/2018
Submit a chronic whole effluent toxicity test report	04/26/2018
Submit an Acute Whole Effluent Toxicity Test Report	04/26/2018
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New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water Permitting

RESPONSE TO COMMENTS

Comments were received on the NJPDES draft Surface Water Renewal Permit Action No. NJ0001511 issued on February 1, 2013. The thirty (30) day public comment period began on February 12, 2013 when the Public Notice was published in the *Star Ledger*. It ended on March 14, 2013. The following person commented during the public comment period:

A. David Erfert, Bayway Refinery Manager, Phillips 66, in a letter dated March 1, 2013.

A summary of the timely and significant comments received, the New Jersey Department of Environmental Protection's (Department) responses to these comments, and an explanation of any changes from the draft action have been included below:

1. Comment:

Bayway Refinery fully supports the proposed continuation of existing permit limits at DSN 001 and Technology Based Effluent Limits at DSN 002. Our support is based on public hearing testimony and data presented to the Department in support of the existing permit renewed in 1993 and additional information submitted to the Department for the current permit renewal, including information submitted to the Department dated September 28, 2006 that supplemented the NJ0001511 permit renewal application. As the Department is aware, the economics for petroleum refineries located along the East Coast have been and continue to be very difficult, with only three New Jersey refineries still in operation today. The continuing viability of the Bayway Refinery is contingent on numerous factors, including the renewal of the existing NJPDES permit in a manner that allows the Bayway Refinery to operate as safely and cost-effectively as possible, while continuing to be protective of the environment.

Response:

The Department acknowledges these comments that express support of the NJPDES permit renewal for the purposes of the Administrative Record.

No change has been made to the final permit as a result of this comment.

2. Comment:

For purposes of the Administrative Record, Bayway Refinery notes that "NJNJ SWQS" should be "NJ SWQS" at multiple locations on Fact Sheet Pages 6, 7 and 8 of 55.

Response:

The permittee is correct in that the language in the above referenced pages should be revised since "NJ" was erroneously referenced twice in each instance. The corrected language is as follows where deletions are shown with strikethrough:

"In other words, a Section 316(a) determination would override the ~~NJNJ~~ SWQS thermal discharge."

"Bayway requests a thermal variance from the ~~NJNJ~~ SWQS under section 316(a) of the Clean Water Act."

"The permittee conducted a Section 316(a) study to request a thermal variance from the ~~NJNJ~~ SWQS."

“The Department recognizes that Morses Creek is indeed a stream that shall be protected via the ~~NJ~~ NJ SWQS.”

Since the Fact Sheet is not part of the final permit package, these changes are hereby incorporated into the Administrative Record via this response.

No change has been made to the final permit as a result of this comment.

3. Comment:

For clarity, Bayway Refinery notes that costs referenced in the Fact Sheet that were taken from reports submitted by the Bayway Refinery to NJDEP in 1995 were not escalated to current costs for purposes of the permit renewal. The NJDEP properly stated on Fact Sheet Page 8 of 55 that the least costly alternative would currently cost over \$300 million.

Response:

The Department acknowledges that costs referenced within the Fact Sheet were based on 1995 numbers. Since the Fact Sheet is not part of the final permit package, this clarification is hereby incorporated into the Administrative Record via this response.

No change has been made to the final permit as a result of this comment.

4. Comment:

Bayway Refinery notes the following typographical errors contained within the draft permit requirements:

- Part II, Section B.7.a. on Page 2 of 3: “ponded condtion” should be “ponded condition”.
- Part III, Table III-F-1 on Page 65 of 69: “4-Chlorophenyl pheny lether” should be “4-Chlorophenyl phenyl ether”.
- Part IV, Section G.1.b.ii. on Page 11 of 14: “of” should be “or” on the second line “1) using a fiberglass composite ~~of~~ or a similar non-abrasive material ...”.
- Part IV, Section G.7. iii. on Page 14 of 14: delete repeated “and” in next to last line.

Response:

The above language revisions have been made to the appropriate sections of the final permit based on this comment. All changes are reflected the appropriate sections of Parts II, III and IV of the final permit action.

5. Comment:

Bayway Refinery requests that the Averaging Period for Oil and Grease mass load limits be corrected from “Instant Max.” to “Daily Max.” at the following locations:

- Fact Sheet, Section 15 Permit Summary Tables, Page 31 of 55, DSN 001A parameter Oil and Grease, Net mass load showing existing and final limits of 2260 kg/d (revision requested for purposes of the Administrative Record).
- Fact Sheet, Section 15 Permit Summary Tables, Page 33 of 55, DSN 002A parameter Oil and Grease mass load showing existing limit of 870 kg/d and final limit of 558 kg/d (revision requested for purposes of the Administrative Record).
- Permit Part III, Table III-A-1, Page 2 of 69, DSN 001A Oil and Grease Effluent Net Value of 2260 kg/d.

- Permit Part III, Table III-B-1, Page 6 of 69, DSN 002A Oil and Grease, Effluent Gross Value, Effl. Adjusted Value of 558 kg/d, and Calculated Adjust.

The following is presented in support of the comment:

- The concentration limit of 15 mg/L applies to grab samples. The mass load is calculated using the grab sample results for the day and the daily (24 hour) average flow. An instantaneous flow is not used to calculate the mass load. The reported mass loading is required to be representative for the day. In the event that more than one grab sample is analyzed during the day, the average of the grab sample results for the day must be used to calculate the mass load for the day.
- The applicable units for the mass load calculation are “kg/d” (kilograms per day).
- Fact Sheet 19 of 55, Item 4. Oil and Grease (O&G) Net correctly states that the 2,260 kg/day is a daily maximum loading limit.
- The mass load Technology Based Limitations for DSN 002A in Fact Sheet Section 17 are based on daily production rates and daily flows, and the mass limit for Oil and Grease is shown as a Daily Max. limit on Page 50 of 55.
- DSN 002A Calculated Adjust. and Effl. Adjusted Values are calculated using the stormwater flow passing through DSN 002A on a daily 24 hour basis.
- Part III – B/C, Page 1 of 8 of the existing permit shows the DSN 001 Oil & Grease net mass load limit of 2260 kg/d is a “Daily Maximum” limit.
- Part III – B/C, Page 7 of 8 of the existing permit shows the DSN 002C Oil & Grease mass load limit of 870 kg/d is a “Daily Maximum” limit.

Response:

The Department concurs that the averaging period for oil and grease should be daily maximum as opposed to instant maximum as shown in the draft permit. Therefore, the Permit Summary Table for DSN 001A on Page 31 of 55 is hereby revised as follows for the purposes of the Administrative Record:

Oil and Grease, Net	Kg/d	Monthly Avg. Daily Max. Instant Max. # ND/# Det.	412.1 1840 45/19	MR 2260 --	MR 2260 --
Oil and Grease, Intake	mg/L	Monthly Avg. Daily Max. Instant Max. # ND/# Det.	-- --	-- --	MR MR
Oil and Grease, Effluent Gross	mg/L	Monthly Avg. Daily Max. Instant Max. # ND/# Det.	-- --	-- --	MR MR
Oil and Grease, Net	mg/L	Monthly Avg. Daily Max. Instant Max. # ND/# Det.	0.84 4.0 45/19	10 15 --	10 15 --

Similarly, regarding DSN 002A, Page 33 of 55 is hereby revised as follows for the purposes of the Administrative Record:

Oil and Grease	kg/d	Monthly Avg. Daily Max. Instant Max. # ND / # Det.	22.14 164 31/33	467 870 --	298 558 --
Oil and Grease	mg/L	Monthly Avg. Daily Max. Instant Max. # ND / # Det.	1.06 6.0 29/35	10 15 --	10 15

The Department has also corrected the tables at Part III, Tables III-A-1 and III-B-1 to state that the averaging period for the limitations and monitoring requirements for DSN 001A and DSN 002A are daily maximums.

These changes can be found at Tables III-A-1 and III-B-1 of Part III of the final permit action.

6. Comment:

Fact Sheet Section 8 on Page 9 of 55 refers to the Net Rate of Addition of Heat as an instantaneous maximum of 2,300 MBTU/Hr. Additionally, Fact Sheet, Section 15 Permit Summary Table on Page 31 of 55 shows an Averaging Period of “Instant Max.” for DSN 001A parameter Net Rate of Addition of Heat. For purposes of the Administrative Record and for consistency through the permit, Bayway Refinery requests that the averaging period in the Fact Sheet be revised from “Instant Max.” to “Daily Max.” The following is presented in support of this comment:

- The heat load is calculated using the daily (24 hour) average flow and the daily (24 hour) average temperature increase.
- Part III – B/C, Page 2 of 8, Note (3) of the existing permit states “MBTU/Hr means the temperature difference times the weight of water in pounds discharged in one hour. The rate is a daily average of 24 hours.” (Underlining added for emphasis). This note is retained in the draft permit on Page 14 of 14 of Part IV Section G.6.a.
- Whereas the refinery’s discharged heat load over the course of a day is typically fairly constant, the heat load measured at DSN 001A can vary more throughout the day because of external factors that affect heat, including tide, weather and time of day (e.g., sunlight). As a result, a 24 hour daily average is the only representative measure of the refinery’s discharged heat load.
- Fact Sheet Item 6. Temperature and Heat on Page 20 of 55 states the 2,300 MBTU/Hr for Net Rate Heat is a daily maximum limit.
- Table III-A-1, Page 3 of 69, correctly shows the permit limit as “Daily Maximum”.

Response:

The language on page 9 of 55 of the Fact Sheet is revised as follows:

“Also carried forward are the Temperature Difference daily maximum limitation of 15 degrees Celsius and the Net rate of Addition of Heat ~~instantaneous~~ **daily** maximum of 2,300 MBTU/Hr.”

The Permit Summary Table on Page 31 of 55 of the Fact Sheet is hereby revised as follows:

Net Rate of Addition of Heat	MBTU /HR	Monthly Avg. Instant. Daily Max.	990.6 1630	MR 2300	MR 2300
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Since the Fact Sheet is not part of the final permit package, this change is hereby incorporated into the Administrative Record via this response. Since Table III-A-1 correctly shows the permit limit as “Daily Maximum”, changes to this page are not necessary.

7. Comment:

Fact Sheet Page 13 of 55 states that “Bayway” contends the reason for a reduction in impingement between two studies is not clear. For purposes of the Administrative Record, Bayway Refinery wishes to clarify that the April 1995, Bayway Refinery Impingement and Entrainment Study prepared by EA Engineering, Science and Technology and submitted by Bayway to NJDEP stated on Page 6-3 of the study that “The reasons for this apparent reduction in impingement at Bayway over the past 15-20 years is not clear.” The consultant and not Bayway provided the data analysis.

Response:

The Department does not object to this clarification and hereby modifies this sentence as follows:

“The April 1995 report concludes that the reason for this apparent reduction in impingement between these two studies is not clear.”

Since the Fact Sheet is not part of the final permit package, this clarification is hereby incorporated into the Administrative Record via this response.

No changes have been made to the final permit as a result of this comment.

8. Comment:

NJDEP has deleted the existing permit condition Part III – B/C, Page 2 of 8, Note (1) that allowed the netting of “stormwater derived loading as monitored past Dam #2.” The existing permit Fact Sheet addressed this on Page 11 of 39, stating “If TSS, TOC and Oil and Grease are monitored over Dam #2, these mass loadings may be added to the intake water mass loadings in the calculation of net limits. This is allowed since DSN 001A is an instream monitoring point that is composed of both the permittee’s discharges and Morses Creek water derived upstream of DSN 001A. NJAC 7:14A-3.14(h)3 allows netting of background pollutants. The permittee has shown compliance problems if the netting is not allowed, indicating that the source of pollutants is the creek rather than the facility.”

During the prior permit renewal, Exxon, as the prior permittee, requested and the Department initially denied the inclusion of netting Dam #2 stormwater loads from Dam #1 loads. This provision was subsequently added to the permit by the Department based on information provided to the Department in a February 3, 1993 letter by Exxon under Comment 2 on pages 2 and 3 of the letter. It is Bayway Refinery’s understanding that NJDEP has removed the existing condition for the same reason originally documented in the 1993 letter, “N.J.A.C. 7:14A-3.14(h) does not provide for a net allowance for stormwater. Net limits are only allowed, “if the discharger demonstrates that its intake water is drawn from the same body of water into which the discharge is made...”.

In response to NJDEP’s comment in 1993, Exxon wrote and NJDEP accepted the following response to the comment, leading to the inclusion of the netting of Dam #2 stormwater loads from Dam #1 loads for TSS, TOC and Oil and Grease:

“The request for a net limit for stormwater is due to the location and composition of DSN 001A water. DSN 001A was created to encompass the various inputs into Morses Creek until further definition could be made on each individual discharge. Since DSN 001 is composed of nearly 100% refinery/chemical plant discharges, monitoring limits are appropriate. During periods of rainfall and other precipitation induced events, the upper portion of Morses Creek that is retained by Dam #2 spills over into lower Morses Creek and passes through DSN 001A.

The request to net stormwater is allowed by NJAC 7:14A-13.4(k) since the upper portion of Morses Creek is comprised mostly of stormwater derived from Linden and Roselle. Dam #2 retains upper Morses Creek to form a reservoir but all of the water is classified as Morses Creek.

The request is to allow pollutants naturally present in upper Morses Creek to be netted from monitored pollutants at DSN 001A during storm events that cause a discharge over Dam #2. NJAC 7:14A-3.14(h)3 states that “Subsection (h) shall apply to discharges to surface or groundwater only if the discharger demonstrates to the satisfaction of the Department that the discharger is not responsible for the background pollutants present in the intake water”. Since the refinery/chemical plant have no discharges to Morses Creek above Dam #2 except for minor stormwater runoff, the pollutants present in the dam overflow are not from the facility. Therefore, the regulatory condition is met.”

Presented in another manner, just as cooling water originating from the Arthur Kill is returned to the Arthur Kill, stormwater originating within Morses Creek upstream of the refinery remains within Morses Creek at DSN 001A. Morses Creek at Dam 2 is the same body of water as Morses Creek at Dam 1. As such, Bayway Refinery again requests that this condition be included in the renewed permit for the same reason that it was previously included. Without inclusion of this condition, Bayway Refinery can again be exposed to potential noncompliance at DSN 001 due to causes unrelated to its operations and beyond its control (e.g., offsite runoff originating from heavy rain events that passes through DSN 001).

Response:

Please note that the referenced regulatory citation at NJAC 7:14A-3.14(h)3 no longer exists in the current regulations and has been replaced with NJAC 7:14A-13.4(k).

The Department acknowledges that the 1993 permit allowed netting for TSS, TOC and Oil and Grease from above Dam #2 by specifying a procedure for subtracting these loadings from the Dam #1 (DSN 001A) loads. The current regulatory citation that provides for net calculations is located at N.J.A.C. 7:14A-13.4(k) and states the following:

(k) Except as provided below, technology based effluent limitations imposed in permits shall not be adjusted for pollutants in the intake water.

1. Upon request of the discharger, technology based effluent limitations or standards shall be adjusted to reflect credit for pollutants in the discharger's intake water if:

i. The applicable effluent standards specifically provide that they may be applied on a net basis; or

ii. The discharger demonstrates that the control system it proposes or uses to meet applicable technology based limitations and standards would, if properly installed and operated, meet the effluent limitations and standards in the absence of pollutants in the intake water;

2. The permit includes conditions requiring:

i. The permittee to conduct additional monitoring (for example, for flow and concentration of pollutants) as necessary to determine continued eligibility for and compliance with any such adjustments; and

ii. The permittee to notify the Department if eligibility for an adjustment under this section may no longer be applicable. In that case, the permit shall be modified accordingly under N.J.A.C. 7:14A-16.4(b)8;

3. Credit for generic pollutants such as biochemical oxygen demand (BOD) or total suspended solids (TSS) shall not be granted unless the permittee demonstrates that the constituents of the generic measure in the effluent are substantially similar to the constituents of the generic measure in the intake water or unless appropriate additional limits are placed on process water pollutants either at the outfall or elsewhere;

4. Credit shall be granted only to the extent necessary to meet the applicable limitation or standard, up to a maximum value equal to the influent value. Additional monitoring may be necessary to determine continued eligibility for credits and compliance with permit limits;

5. Credit shall be granted only if the discharger demonstrates that the intake water is drawn from the same body of water into which the discharge is made. For the purposes of this provision, same body of water means any hydrologically connected waterbody provided chemical characteristics are essentially identical. Chemical characteristics may be evaluated on a parameter by parameter basis; and

6. The discharge of raw water clarifier sludge generated from the treatment of intake water shall not be adjusted for pollutants in the intake water.

Based on the above, the Department has determined that credit for pollutants in the Dam #2 overflow does not meet the criteria of N.J.A.C. 7:14A-13.4(k). This is based on the fact that the permittee does not use Dam #2 overflow as intake water in their processes. In addition, N.J.A.C. 7:14A-13.4(k)1.ii. requires that the permittee "demonstrate that the control system it proposes or uses to meet applicable technology based limitations and standards would, if

properly installed and operated, meet the effluent limitations and standards in the absence of pollutants in the intake water;”. In this case there is no control system..

When the overflow from Dam #2 causes exceedences of the limitations at DSN 001A due to heavy rainfall amounts, the permittee may request an Affirmative Defense as long as the criteria at N.J.A.C. 7:14A-8.3(i) are met.

No change to the final permit is necessary as a result of this comment.

9. Comment:

Part III, Table III-B-1, Location Description for DSN 002A requires permit compliance sampling to be conducted at Lat. = 40d 37' 45.3" and Long. = 74d 13' 31.4". This Location Description is unclear to Bayway Refinery. If this location is intended to correspond to the Parshall Flume that monitors the wastewater treatment plant (WWTP) effluent, Bayway Refinery supports this location. However, based on digital images, this location appears to be the location downstream of the Parshall Flume where the sewer that carries the WWTP effluent discharges into Morses Creek. Bayway Refinery believes that the sewer outlet into Morses Creek is not the proper sampling location for DSN 002 and requests that the Location Description be confirmed to be the Parshall Flume or revised to remain at the existing sampling location within the Parshall Flume that monitors the WWTP discharge. The following is presented in support of our comment:

- The Parshall Flume is the existing sampling location that has been used to monitor the WWTP effluent since its installation.
- The Parshall Flume is the sampling location reviewed and agreed upon with the Department during the permit renewal visit conducted by the Department's permitting staff. This visit included a review of the sewer discharge location into Morses Creek, which was clearly not appropriate to the permitting staff for the collection of samples intended to be representative of the DSN 002 discharge.
- The "Schematic of Wastewater Sampling Points" included within the Fact Sheet shows the DSN 002 sampling location at the Parshall Flume.
- The existing composite sampler for DSN 002 is located at the Parshall Flume. Relocation of the sampler station to the Morses Creek outlet location would be difficult and costly. Nearly 1,000 feet of electrical wiring would be required to be run from the Oil Movements Control Center to maintain the ability to collect flow proportioned samples that currently exists at the Parshall Flume. A sampler shed would also have to be installed to safely house the sampling equipment.
- Flow discharging into Morses Creek from the sewer that carries the WWTP effluent will not always be representative of the WWTP effluent. This sewer also carries street runoff and detained stormwater from a tankfield.
- The sewer discharges immediately adjacent to the Dam 2 condenser sewer in an area of Morses Creek that routinely sees sheen from historical contamination overlying the creek bed. Because of the Dam 2 location, shoreline orientation, and Dam 2 condenser sewer flow (which is routinely 3 to 4 times that of the WWTP flow), sheen from historical sources tends to collect and eddy along the Dam 2 bulkhead and DSN 002 sewer outlet.
- Flow from the Parshall flume free falls into the top of the sewer that carries the flow to Morses Creek, aggressively aerating it and mixing it with any other water sources that may be present (e.g., stormwater).
- The DSN 002 sewer outlet into Morses Creek is routinely submerged and can routinely get flow from Morses Creek backing into it during spring tides, storm surges and heavy rain events.
- The sewer discharging the WWTP effluent into Morses Creek is essentially a 7 foot wide by 4 foot deep box. As a result, the average 9 MGD flow discharged from the WWTP travels at only 0.5 feet per second through this box. At this low velocity, the flow is laminar, separation can occur within the stream, and the stream will not be well mixed. Flow that is not well mixed may not result in a representative sample.
- Referencing the USEPA NPDES Permit Writers' Manual, Chapter 8, Section 8.1.2 Monitoring Location states the following: "The NPDES regulations do not prescribe exact monitoring locations; rather, the permit writer is responsible for determining the most appropriate monitoring location(s) ... the permittee is responsible for

providing a safe and accessible sampling point that is representative of the discharge ... Permit writers should establish monitoring locations where the wastewater is well mixed, such as near a Parshall flume or at a location in a sewer with hydraulic turbulence.” Exhibit 8-1 Examples of specifying monitoring locations in permits, clearly shows the Parshall flume as the NPDES compliance sample location for a discharge that enters a receiving stream further downstream of the Parshall flume.

- NJAC 7:14A-13.16 (a)7. states: “For discharges into stormwater conveyances, the point of compliance shall be established prior to the discharge into the stormwater conveyance ...”. As previously stated, the sewer that DSN 002 discharges into also carries stormwater runoff.

Response:

The description location of Lat. = 40d 37' 45.3" and Long. = 74d 13' 31.4 is only given to show the actual physical location of the outfall into the receiving waterbody. Since the description at Part III, Table III-B-1, Location Description is misleading as to where the actual sampling location for this outfall is, the Department has revised the language as follows:

“Sampling shall be performed after the last treatment step at **the Parshall Flume before the final discharge into Morses Creek** at DSN 002A. The final discharge location of DSN 002A into Morses Creek is Lat. = 40d 37' 45.3" and Long. = 74d 13' 31.4".

This change affects Table III-B-1 of Part III of the final permit action.

10. Comment:

The draft permit includes monitoring for new discharge points DSN 003A (Tables III-C-1 and III-C-2), DSN 004A (Tables III-D-1 and III-D-2) and DSN 005A (Tables III-E-1 and III-E-2). With the exception of the flow parameter which is calculated and the parameter IC25 Statre 7day Chr (see Page 18 of 69, Table III-C-1 for DSN 003A, Page 30 of 69, Table III-D-1 for DSN 004A, and Page 42 of 69, Table III-E-1 for DSN 005A), all other sampling requirements are grab samples. The draft permit further specifies that all sampling will be conducted during dry weather at DSN 003A, DSN 004A and DSN 005A. Final Monitoring Requirements on Fact Sheet Pages 35 through 40 of 55 are also asterisked to a note requiring sampling to be conducted during dry weather, including Chronic Toxicity (Fact Sheet Pages 36, 38 and 40 of 55).

Bayway Refinery is agreeable to dry weather sampling only for grab sample parameters. However, Bayway Refinery requests that the permit be revised to clarify, note or otherwise exempt chronic toxicity testing from the dry weather sampling requirement. We propose that the wording “Sampling shall be conducted during dry weather” be clarified to “Grab sampling shall be conducted during dry weather”, thereby specifically excluding 7 day chronic toxicity tests from the dry weather sampling restriction. This request is based on the following practical considerations:

- Part IV, section A.1.h. requires toxicity test monitoring to be conducted concurrently with WCR parameters when feasible. As such, Bayway Refinery will attempt to schedule toxicity testing to occur during dry weather grab sampling at DSN 003A, 004A and 005A. However, chronic toxicity testing of aquatic organisms is done using composite samples collected over 7 days. Bayway Refinery is limited to using NJDEP certified labs which have submitted Chronic Methodology Questionnaires for the Bayway Refinery site to the NJDEP. The available labs are limited in number and the tests typically have to be scheduled in advance to ensure lab availability and set up sampling equipment.
- Although Bayway Refinery can attempt to schedule these tests with the lab based on long term weather forecasts, long term weather forecasts change routinely. As such, Bayway Refinery does not have the ability to schedule these tests in advance ensuring 7 consecutive days of dry weather.
- Even if Bayway Refinery could schedule the tests based on forecasts of 7 consecutive days of dry weather, weather patterns can change once the tests start and rain which was not forecast can occur routinely over a 7 day period.

- Chronic toxicity tests are costly tests (currently about \$1,000 per test) and Bayway Refinery will have to run tests at 3 locations. In the event that any rain fell after the tests were initiated, the dry weather sampling requirement could negate the test result, force the test to be stopped, and require the tests to be rescheduled. This would then require the lab to notify the Department that a test was stopped and why, and plan another test for the 3 locations during dry weather with unnecessary recurring costs to Bayway Refinery.
- Sampling methodology does not allow collection and retention of 7 days of sampling before initiating the chronic testing as a means to ensure all sampling was done during dry weather before expending costs on the chronic testing.
- Fact Sheet Page 27 of 55 states “All samples for these three outfalls shall be performed during a dry weather event with a grab sample type.” That requirement either overlooks or contradicts the composite sample requirement for the chronic testing.

Response:

The Department agrees that the requested change to the footnotes on the Permit Summary Tables on Pages 35 through 40 of 55 should be revised to exempt the parameters of flow and Chronic WET. Therefore, the language in footnote “*” is hereby revised as follows:

“* **Grab** sampling shall be conducted during dry weather.”

Also, the language on Page 27 of 55 is revised as follows:

“All samples for these three outfalls, **with the exception of flow and Chronic WET**, shall be performed during a dry weather event with a grab sample type.”

Since the Fact Sheet is not part of the final permit package, these changes are hereby incorporated into the Administrative Record via this response.

Similarly, the Comments field in Tables III-C-1, III-C-2, III-D-1, III-D-2, III-E-1 and III-E-2 is hereby modified as follows:

Comments:

Grab sampling shall be conducted during dry weather.

11. Comment:

Semiannual monitoring for DSN 003A (Table III-C-2, Page 27 of 69), DSN 004A (Table III-D-2, Page 39 of 69), and DSN 005A (Table III-E-2, Page 51 of 69) includes the parameter “Phenols”. DSN 002A Table III-B-1 on Page 16 of 69 includes the parameter “Phenolic Compounds, Unchlorinated”. Bayway Refinery’s existing permit requirement for DSN 002 is “Phenolic Compounds”, which is being determined using USEPA method 420.1 (total recoverable phenolics). Bayway Refinery requests that NJDEP confirm or clarify that the requirement to report Phenolic Compounds, Unchlorinated for DSN 002A and Phenols for DSN 003A, 004 A and 005A is the same parameter currently determined by USEPA method 420.1 for DSN 002, or advise the intended analytical method for each DSN location.

Response:

The parameter of “Phenolic Compounds, Unchlorinated” is being revised in this final permit action to state “Phenolic Compounds, Total Recoverable” to allow consistency with the previous permit. These terms are both considered the same parameter where both are analyzed using USEPA method 420.1. This change can be found on Page 8 of 70 (now Page 20 of 46) of Part III in the final permit.

With regard to the parameter “Phenols”, this is a different parameter and is defined as a class of aromatic compounds having a hydroxyl (-OH) group, as well as other substituent groups, on a six-carbon benzene ring. The USEPA list of priority pollutants include a number of phenols measured in the acid fraction of the base/neutral/acid (BNA) analysis (or the semivolatile organic compounds analysis) using EPA Methods 525, 625, 1625, and 8270.

12. Comment:

Part III, Pages 54 through 68 of 69, contain Tables III-F-1 (Residuals DMR), III-F-3 (Annual Residuals WCR), and III-F-4 (Monthly Residuals WCR). To ensure that Bayway Refinery understands the draft permit properly, we request that NJDEP confirm that there is no Table III-F-2 included within the draft permit. We also note that a table format or number was not included for the monthly Residuals Transfer report requirement on Page 69 of 69.

Response:

The NJEMS database, which generates the Part III tables for the permit, intentionally “skips” the Table III-F-2 label when generated. Fixing this problem requires a NJEMS system enhancement that will not be completed in the near future. Therefore, the table labeling remains unchanged in the final permit.

No table is provided on page 69 of 69 (now Page 46 of 46) in the final permit because the Residuals Transfer Report does not contain parameters. The form simply tracks where residuals were received from and sent to at the facility. Therefore, only a reporting requirement is needed and the page remains unchanged in the final permit.

No change to the final permit is necessary as a result of this comment.

13. Comment:

Part III, Page 54 of 69 identifies the Location Description for sludge sampling as the plate and frame filter press. This is consistent with Bayway Refinery’s current and past practice of processing biological sludge using a plate and frame filter press. However, the existing permit does not specify the sampling location and the proposed requirement may limit Bayway Refinery’s ability to process biological sludge in the future using some other method (e.g., centrifuge) either on a short term (e.g., in the event of a filter press outage) or long term basis. As such, we request that the NJDEP include the flexibility within the permit to use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Response:

The Location Description for monitored location SI8A contained on page 54 of 69 (now Page 31 of 46) in the final permit for informational purposes and not intended to limit Bayway’s ability to process their biological sludge. In the event the plate and frame press is no longer being utilized, a revised Form R – Industrial Generator indicating the change in processing should be submitted to the following address: Bureau of Pretreatment and Residuals, Division of Water Quality, Mail Code 401-02B, PO Box 420, Trenton, NJ 08625-0420. This form can be found on the Department’s website at (http://www.state.nj.us/dep/dwq/pdf/form_r_industrial_generator.pdf).

14. Comment:

Part IV, Section A. 1.m, Page 2 of 14 should be revised from “Net limitations for DSN 001A shall be calculated by using the following formula ...” to “Net concentration limitations for DSN 001A shall be calculated by using the following formula ...” since the formula is for a concentration calculation. The net mass load would be calculated by excluding “gross effluent flow” from the divisor in the equation.

Response:

The Department concurs with this change and has revised the language at Part IV, Section A. 1.m, Page 2 of 14 as follows:

“Net **concentration** limitations for DSN 001A shall be calculated by using the following formula:...”

This change is reflected at Part IV, Section A. 1.m of the final permit.

15. Comment:

Part IV, Section E.5.f., Page 8 of 14 should be revised to require submittal of acute toxicity test reports within 25 days after the end of the quarter, to be consistent with the quarterly acute toxicity test requirements for DSN 001A and 002A. The requirement currently references a 6 month monitoring period, which is only applicable to the chronic toxicity testing proposed for DSN 003A, 004A and 005A (and not the acute toxicity testing at DSN 001A and 002A).

Response:

The Department concurs with this comment and has revised the language at Part IV, Section E.5.f., Page 8 of 14 as follows:

“Submit an acute whole effluent toxicity test report: within 25 days after the end of every ~~6-month~~ **quarterly** monitoring period beginning from the effective date of the permit (EDP).”

This change is reflected at Part IV, Section E.5.f. of the final permit.

16. Comment:

Part IV, Section E.7.b. and c. on Page 9 of 14 are nearly identical except for the apparent conflict between the increased monitoring frequency in the event of action level exceedances (b. states “semi-monthly” and c. states “monthly”). Bayway Refinery requests the NJDEP clarify the applicable requirement(s).

Response:

The Department inadvertently included the conditions for both major and minor rated facilities, where only the condition for major facilities should have been included, i.e. item c. where the frequency is monthly. Therefore, the Department has removed item b. from Section E.7 on Page 9 of 14 of the final permit. A summary of the language from the draft permit as compared to the final permit is as follows:

- ~~b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits or action levels in Part III. The monitoring frequency for toxicity testing shall be increased to semi-monthly (i.e. every two months). Up to 12 additional tests may be required.~~
- b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits or action levels in Part III. The monitoring frequency for toxicity testing shall be increased to monthly. Up to 12 additional tests may be required.
- i. The permittee may return to the toxicity testing frequency specified in Part III if four consecutive toxicity tests conducted during the Toxicity Characterization do not exceed the toxicity limit or action level.
- ii. If two out of any six consecutive, acceptable tests again exceed the toxicity limit or action level in Part III, the permittee shall repeat the Toxicity Reduction Implementation Requirements.

17. Comment:

Part IV, Section E.7.d. and e. on Page 9 of 14 are nearly identical except for the apparent conflict between the number of exceedances that trigger a preliminary toxicity identification (d. states “third exceedance” and e. states “fourth exceedance”). Bayway Refinery requests the NJDEP clarify the applicable requirement(s).

Response:

The Department inadvertently included the conditions for both major and minor rated facilities, where only the condition for major facilities should have been included, i.e. item d. In addition, as described in Comment 16 above, this item has been renumbered accordingly. Therefore, the Department has made the following changes to Section E.7.c. on Page 9 of 14 of the final permit.

c. ~~d.~~ The permittee shall initiate a preliminary toxicity identification (PTI) upon the third exceedance of the toxicity limit or action level specified in Part III during toxicity characterization.

~~e. The permittee shall initiate a preliminary toxicity identification (PTI) upon the fourth exceedance of the toxicity limit or action level specified in Part III during the toxicity characterization.~~

18. Comment:

Part IV, Section G.4.a. specifically disallows the discharge of water from the East Side Retention Basin (ESRB) to the Railroad Avenue ditch. As the Department knows, during heavy rain events, runoff into the ESRB can exceed the ESRB retention and pumping capacity, resulting in an overflow to the East Side cooling water ditch, which then flows into the Railroad Avenue ditch before discharging into Morses Creek. When an overflow would occur in the past, Bayway Refinery would report the overflow to the NJDEP Hotline as an unanticipated bypass of the WWTP, sample and analyze the overflow for stormwater parameters, and document the overflow in a confirmation letter to the NJDEP in accordance with NJPDES reporting requirements for unanticipated bypasses. If this condition is not changed, Bayway Refinery would have to continue the current reporting and sampling response to an unanticipated bypass of the ESRB.

To avoid unnecessary reporting and allow Bayway Refinery the flexibility to operate the WWTP in the most effective and environmentally beneficial manner, Bayway Refinery requests that the NJDEP revise this section to allow controlled overflows of stormwater only. Bayway Refinery proposes that in all cases a first flush of the basin contents would be completed to the WWTP prior to initiating an overflow. Bayway Refinery is also willing to sample DSN 001A for TOC, TSS and Oil and Grease whenever an ESRB overflow occurs and to note the extra sampling on the applicable monthly DMR. Only stormwater and possibly commingled condensate would be included in the overflow. In the event that process wastewater was contained within the overflow, the unanticipated bypass of wastewater would be reported to the NJDEP Hotline, the overflow would be sampled for TOC, TSS and Oil and grease, and the event would be documented in a confirmation letter to NJDEP as well as noted in the applicable DMR.

Bayway Refinery originally requested NJDEP recognize in the draft renewal permit the acceptability of storm water overflows from the ESRB at a permit renewal site visit meeting on September 22, 1999, as documented in an October 5, 1999 letter to the NJDEP. NJDEP responded in a December 28, 1999 letter that “A special condition will be included in the draft renewal permit allowing discharge to the Railroad Avenue Ditch when the wastewater consists solely of uncontaminated stormwater. This condition will also require that the wastewater be routed to the wastewater treatment plant if and when process wastewater is to be discharged or if stormwater is not uncontaminated (e.g., if a spill had occurred and mixed with the stormwater).” This condition or similar wording is acceptable to the Bayway Refinery and is consistent with the reporting requirements at NJAC 7:14A-6.10 for bypasses of untreated wastewater. In the event that wastewater were within the ESRB influent and an overflow occurred to Railroad Avenue Ditch, Bayway Refinery would follow the requirements of NJAC 7:14A-6.10, whether or not stormwater were also present in the influent.

Repeating background presented in the October 5, 1999 letter, the ESRB was originally constructed to equalize and neutralize process wastewaters before pumping them to the WWTP. In 1988, all process water streams were removed from the ESRB influent except for one stream which was subsequently also removed from the ESRB. Now, only stormwater and occasionally condensate routinely enter the ESRB. Stormwater runoff entering the ESRB originates from a section of the refinery formerly known as the East Side Chemical Plant. Process units in the area that drain to the ESRB primarily handle butanes, propanes, butylenes and propylenes, all of which are vapor under ambient conditions. Because the ESRB continues to be pumped to the WWTP, the refinery may still use the flexibility to discharge wastewater to the ESRB on occasion. For example, during planned process unit shutdowns for maintenance, cleaning water from process units has been allowed to drain to the ESRB. In all cases, any wastewater introduced to the ESRB is manually controlled and of limited duration.

Although none of the process units that drain stormwater to the ESRB process hydrocarbon that is liquid under ambient conditions, Bayway Refinery recognizes that stormwater runoff could still carry residual oil to the ESRB (e.g., lubricating oil leak from process equipment such as pumps and compressors). Because of this potential, the inlet channel to the ESRB is constructed with an oil retention baffle and an associated vacuum truck skimming location. In the event of an ESRB overflow, there is also a permanent oil spill retention baffle located within the East Side ditch, and at least 4 more oil spill collection booms within Railroad Avenue ditch upstream of Morses Creek. The use of oil spill baffles and oil spill booms to retain residual oil present in stormwater runoff is accepted practice.

During heavy rain events, ESRB overflows have occurred due to the limited capacity of the ESRB. In all cases, the overflows did not contain any wastewater or oil. Bayway Refinery is not requesting that all water entering the ESRB be allowed to discharge to Railroad Avenue Ditch. To ensure that stormwater only is discharged, Bayway Refinery proposes that stormwater would only be allowed to bypass the ESRB after a first flush of the ESRB contents was completed to the WWTP and after it was confirmed that oil and wastewater were not present within the ESRB. We propose to keep the ability to pump the ESRB to the WWTP because of the flexibility it provides to contain a possible leak and to address the first flush of any residual that may enter the ESRB at the onset of rain.

NJAC 7:14A-6.10(a) requires permittees to report any noncompliance, including unanticipated bypasses under (a)3. Bayway Refinery does not believe NJAC 7:14A-6.10(a) is applicable to stormwater only discharges, whether or not they can be considered a bypass as NJAC 7:14A-6.10 bypasses should only apply to untreated wastewater. However, to avoid ambiguity as to the interpretation and application of NJAC 7:14A-6.10, Bayway Refinery has in the past reported bypasses of stormwater only from the ESRB to the NJDEP Hotline, followed by sampling and a confirmation letter to the NJDEP. The Hotline calls always triggered an onsite inspection by local authorities acting on NJDEP's behalf, even though the Hotline call would state that it was stormwater only. This can be considered a waste of agency resources responding unnecessarily to a Hotline call that was only made because of the ambiguous wording of the rule.

NJAC 7:14A-6.10 also contains requirements that support its inapplicability to stormwater. For example, (d)3 and (d)6 require the permittee to advise "Steps being taken to reduce, remediate, and eliminate the noncomplying discharge" and (f)(4) requires an explanation why the unanticipated bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, ... why there was no feasible alternative to the unanticipated bypass, including but not limited to the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of downtime; and ... that the unanticipated bypass did not occur during normal periods of equipment downtime or preventive maintenance when back-up equipment should have been installed to avoid the unanticipated bypass." As the NJDEP knows, the ESRB overflows only occur as a result of heavy rain that exceeds the capacity of the ESRB.

Bayway Refinery's request to allow stormwater only to overflow the ESRB to Railroad Avenue Ditch would have multiple benefits if approved. By clarifying that the Hotline only needs to be called when wastewater is present, it will reduce Hotline calls and the associated drain on local agency resources that respond to Hotline calls, especially since overflows have only occurred during heavy rain events that caused incidents at other locations utilizing Hotline and local agency resources. Allowing stormwater only overflows from the ESRB to Railroad Avenue Ditch would also be environmentally beneficial as it would reduce the amount of runoff entering the WWTP during heavy rain events. This would improve the Bayway Refinery's ability to effectively manage heavy runoff into the WWTP, reducing the

risk of untreated wastewater overflows from process sewers, and reducing the risk of overfilling retention and treatment facilities that contain untreated wastewater.

In support of our request, we also note that both the Bayway Refinery NJ DPCC Plan and USEPA SPCC Plan allow retained stormwater to be discharged directly to receiving waterbodies from oil storage areas (e.g., tankfields), with the following operator controls:

- During or after precipitation, the containment area should be inspected for oil leaks/spills. Stormwater should not be drained if there is visible sheen or oil present.
- If there are no signs of a leak or spill, a supervisor must approve each drainage event to Morses Creek and the start and finish of the drainage event must be recorded.

USEPA manuals also specifically allow stormwater to be discharged without treatment from containment areas that only process oil that is vapor under ambient condition, which is the case for the stormwater that enters the ESRB. As one reference, Figure 3-3 from EPA-450/3-85-001a, VOC Emissions from Petroleum Refinery Wastewater Systems – Background Information for Proposed Standards, shows oily water that is not process water being discharged directly to waterbodies after oil-water separation only.

Response:

This comment refers to the following condition in the permit:

4. East Side Retention Basin

- a. The East Side Retention Basin is located in a section of the refinery that includes process units. The process units that drain to the basin primarily handle butanes, propanes, butylenes and propylenes. The basin is used primarily to detain storm water, which is then pumped to the wastewater treatment plant. It is recognized that the basin's storage volume and pumping capacity are inadequate to handle very intense or heavy rainfall events.
- b. This permit authorizes the eventual discharge from the on-site wastewater treatment plant of any water from the East Side Retention Basin. However, this permit does not authorize the discharge of water from the East Side Retention Basin directly to the Railroad Avenue ditch.

The Department maintains that diversion of stormwater from the ESRB is allowable. However, diversion of stormwater from the ESRB directly to Morses Creek is prohibited. If the permittee wishes for this discharge to be authorized, a permit modification should be requested, so that this discharge may be included in the permit as an additional outfall.

In the event that circumstances result in the treatment plant being unable to accept water from the ESRB due to capacity issues, the permittee is correct in that it is required to comply with the regulatory conditions at N.J.A.C. 7:14A-6.10. The Department maintains that this condition is routinely applied to other NJPDES permittees and maintains that is not overly burdensome. Specifically, the permittee shall report the overflow of the ESRB to the NJDEP Hotline as an unanticipated bypass of the WWTP, sample and analyze the overflow for stormwater parameters, and document the overflow in a confirmation letter to the NJDEP in accordance with NJPDES reporting requirements for unanticipated bypasses. The permittee shall also route the first flush of the basin contents to the WWTP prior to allowing an unanticipated bypass. Every effort should be made to send as much water from the ESRB to the WWTP as possible during heavy rainfall events.

The commentor states “Because the ESRB continues to be pumped to the WWTP, the refinery may still use the flexibility to discharge wastewater to the ESRB on occasion. For example, during planned process unit shutdowns for maintenance, cleaning water from process units has been allowed to drain to the ESRB. In all cases, any wastewater introduced to the ESRB is manually controlled and of limited duration.” Therefore, there is a potential for untreated process water to be in the ESRB at times when heavy rainfall may occur, thereby causing an overflow of both

untreated stormwater and process water. This potential process wastewater discharge is a reason why reporting of the bypass is necessary.

The Department is not opposed to allowing a discharge to the Railroad Avenue Ditch if the discharge from the overflow is monitored and can meet applicable effluent limitations and monitoring requirements. Therefore, the permittee may request a major modification to the permit to request a new monitored location for the overflow from the ESRB. The Department would then propose a draft permit modification with the appropriate limitations and monitoring conditions. The draft permit would be public noticed for public comment in accordance with the requirements at N.J.A.C. 7:14A-15.10.

No changes have been made to the final permit as a result of this comment.

19. Comment:

The existing permit currently includes a clause that exempts the reporting of bypasses of the WWTP tertiary filters to the NJDEP Hotline and the submittal of a confirmation letter to the NJDEP unless the bypass is associated with a TSS permit limit exceedance. The draft permit does not contain this clause or similar language. Bayway Refinery requests that the NJDEP include the same or similar language in the renewed permit.

The existing permit wording at Part IV – B/C 1.A.3. continues to be acceptable to Bayway Refinery and states “The treatment system is designed to have the option of providing a final filtration process, if necessary, to meet the total suspended solids limits. If the combined discharge of filtered and unfiltered effluent exceeds the permitted limits, it is reportable as required in Part I.” Alternative wording that would also be acceptable to Bayway Refinery is “The permittee has a final filtration process that may be utilized if needed to meet compliance with the TSS limitation for DSN 002A. If the effluent meets the TSS limitation and the filtration process is bypassed, the permittee does not need to contact the DEP Hotline to report the filter bypass. The permittee is only required to report the bypass to the DEP Hotline if the TSS limitation is exceeded. When the filters are bypassed, the permittee shall analyze a DSN 002A sample for TSS to demonstrate compliance with the TSS limitation and include the result on the DMR with a comment explaining the extra TSS analysis.”

As background, the tertiary filters consist of six dual media, pressure filters that are designed for TSS control only. They do not remove dissolved components or oil. Treated wastewater from the secondary clarifiers flows to a sump from where the water is pumped through the filters prior to discharge through the DSN 002A monitoring station. Any treated water that does not get pumped through the filters can overflow a weir directly to the DSN 002A monitoring station bypassing the filters. Treated wastewater cannot bypass the monitoring station. The filters are highly instrumented and PLC operated, with several common components to all filters, including the influent and effluent lines. Treated flow can bypass the filters under numerous scenarios. The three most common scenarios are: 1) the need to conduct unplanned repairs (e.g., due to equipment malfunction); 2) the need to conduct planned maintenance (e.g., to remove a filter from service for scheduled overhauls); and 3) due to flows in excess of the filter capacity. Because filters share common influent and effluent lines, flow must be stopped through all filters for numerous types of repairs (e.g., valve replacement) or to install blanks allowing a filter to be safely isolated from service for inspection and maintenance. It is not uncommon for filter flow to have to be stopped for 8 – 12 hours for routine repairs. On the other extreme, damage from Hurricane Sandy took well over a month to address before the filters were returned to service.

If treated flow is not allowed to bypass the filters for repairs (planned or unplanned), or during high flows, then Bayway Refinery would be forced to divert untreated wastewater into retention tanks. For many repairs, that would mean stopping all flow through the secondary treatment plant for 8 to 12 hours, and diverting 3 to 5 million gallons of water out of secondary treatment while the filters were out of service. Once the filters were back in service, the diverted untreated wastewater would have to be returned through the secondary treatment plant on top of the routine flow as fast as possible to restore retention capacity. As anyone operating a biological treatment plant knows, biological treatment facilities operate best when flows and loads are kept as steady as possible. The act of diverting flow out of the biological system for filter maintenance, followed by the ensuing increased flow of concentrated

wastewater, is detrimental and could upset the biological plant. This would also likely result in a lower quality effluent compared to the continuous discharge of treated water bypassing the filters.

As noted on Fact Sheet Section 7 Page 4 of 55, the design capacity of the WWTP is 15 MGD, which is limited only by the tertiary filters. Excluding the filter capacity, the demonstrated pumping and secondary treatment capacity of the WWTP is about 22 MGD, as noted on Fact Sheet Page 33 of 55 under Daily Max. Flow. The 22 MGD flow was only possible by partially bypassing flow in excess of the tertiary filter capacity, as allowed by the existing permit. Excess flow bypassing filters has occurred many times while remaining within full compliance with all DSN 002 permit limits and conditions, including the TSS limits. In the case of 22 MGD, at least 7 MGD of additional flow would have to be diverted to avoid a filter bypass. The 22 MGD flow only occurs because of storms that exceed the WWTP filter design and retention capacity. An additional 7 MGD of flow could not have been accommodated and would have unnecessarily resulted in environmental incidents (e.g., overflows of retention facilities). Bayway Refinery needs to be allowed to continue to utilize its ability to handle extreme storm events as best as possible without having to be limited by inapplicable regulatory requirements that would be onerous to WWTP operation if applied.

As the NJDEP knows, when a filter bypass occurs, Bayway Refinery analyzes the composite sample collected during the bypass for TSS and reports the additional analysis on the monthly DMR with a comment advising that a filter bypass occurred. Bayway Refinery offers that it could also notify NJDEP Enforcement when a filter bypass occurs as a courtesy and to advise that the effluent is being maintained within permit limits. However, Bayway Refinery specifically objects to the application of the compliance requirements under NJAC 7:14A-6.10 for filter bypasses of treated wastewater that remains within compliance with the TSS permit limit. Bayway Refinery believes that NJAC 7:14A-6.10 is not applicable nor intended for treated water bypasses that are within permit limit compliance. NJDEP included the existing wording within the permit added during the last renewal to make it clear that it was not applicable because of some ambiguity within the interpretation and application of NJAC 7:14A-6.10 to bypasses.

NJAC 7:14A-6.10(a) requires permittees to report any noncompliance, including but not limited to unanticipated bypasses under (a)3 and anticipated bypasses under (a)4. Bayway Refinery does not believe NJAC 7:14A-6.10(a) is applicable to bypasses of treated wastewater within permit limits but requested the NJDEP address the ambiguity of the references to bypasses with the inclusion of the wording in the existing permit. Bypasses of concern required to be reported under NJAC 7:14A-6.10(a) pertain to untreated wastewater, which Bayway Refinery would and has reported in the past when they occurred. For an unanticipated bypass, (d) requires the NJDEP Hotline to be notified within 24 hours of becoming aware of the discharge, followed by a letter to the NJDEP within 5 days. Bayway Refinery also notes that local agencies are typically dispatched to the refinery acting on the NJDEP's behalf in response to Hotline calls. It would be a complete waste of everyone's resources for an agency to respond to a Hotline call of a tertiary filter bypass that is in TSS permit limit compliance.

Troubling components of the notification requirement that support its inapplicability to treated wastewater bypasses under (d)3 and (d)6 require the permittee to advise "Steps being taken to reduce, remediate, and eliminate the noncomplying discharge" and (f)(4) which requires an explanation why the unanticipated bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, ... why there was no feasible alternative to the unanticipated bypass, including but not limited to the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of downtime; and ... that the unanticipated bypass did not occur during normal periods of equipment downtime or preventive maintenance when back-up equipment should have been installed to avoid the unanticipated bypass." As the NJDEP knows, there are no normal periods of equipment downtime at Bayway Refinery because the refinery is in continuous operation.

Compliance with the requirements under (g) for an anticipated bypass are even more onerous, including at least 10 days notice of the anticipated bypass if possible, a statement certifying that the anticipated bypass is unavoidable to prevent loss of life, personal injury, or severe property damage, and a statement certifying that there is no feasible alternative to the anticipated bypass, including but not limited to the use of auxiliary treatment facilities retention of untreated wastes, or maintenance during normal periods of equipment downtime. This requirement, although inapplicable, would essential force the use of retention capacity for the full untreated wastewater flow during the filter outage simply to avoid discharging treated wastewater within TSS permit limit compliance, an act as stated before that will be more damaging than beneficial to WWTP effluent quality.

Routinely, the Bayway Refinery secondary clarifier effluent is within permit limits and the filters just provide TSS polishing. During WWTP upsets, the filters provide additional capacity to stay within TSS permit limits until WWTP operations can be returned to normal. In all cases, the Bayway Refinery operates the WWTP to stay within TSS permit limits, whether or not the filters are being bypassed. The last exceedance of the TSS daily maximum permit limit was in September 2004. The last exceedance of the maximum daily TSS permit limit prior to that was in 1993. With the ability to utilize filter bypasses and retention capacity as necessary to optimize WWTP operations and provide the best overall effluent quality, the Bayway Refinery has been able to handle storms such as Hurricane Floyd (7 inch, 24 hour rain event), Hurricane Irene (10 inch, 24 hour rain event) and Hurricane Sandy (complete regional power failure and unprecedented storm surge flooding) without a TSS exceedance. The ability to bypass the filters controllably was an essential operational control component that contributed strongly to this performance. If Bayway Refinery did not have the ability to bypass the filters during and following these storms, stormwater retention capacity would have been exhausted sooner, likely leading to environmental incidents that did not otherwise occur.

In further support of the request to allow the ability to bypass the tertiary filters when necessary while maintaining TSS compliance, Bayway Refinery notes that the inclusion of a condition recognizing that the filters can be bypassed as long as TSS permit limit compliance is maintained is consistent with the proposed requirement at Part IV, Section E.4.a. on Page 7 of 14 which states “The permittee shall operate and maintain treatment works and facilities which are installed or used by the permit to achieve compliance with the terms and conditions of this permit ...”. USEPA NPDES permitting documents also support this understanding of the rules. Referencing USEPA’s NPDES Permit Writers’ Manual:

- Section 5.2.1 Effluent Guidelines states “the regulations do not require the use of any particular treatment technology ... Therefore, each facility has the discretion to select any technology design and process changes necessary to meet the performance-based discharge limitations and standards specified by the effluent guidelines.”
- Section 10.1 states “Operation of backup systems is required only when needed to ensure compliance.” Section 10.1 further states that “24-hour reporting is required for an unanticipated bypass exceeding effluent limits ...”.
- Section 10.1 goes on to clarify regarding “The intentional diversion of wastestreams from any portion of a treatment facility. Bypass is prohibited unless the bypass does not cause the effluent to exceed limits and is for essential maintenance to assure efficient operation (no notice or 24-hour reporting is required in such a case)”.

For NJDEP’s reference, we have reviewed and summarized DSN 002 TSS data from August 2011 through December 2012 to capture data from high flow periods (e.g., Hurricane Irene), planned and unplanned maintenance periods, and long term filter outages (e.g., due to damage from Hurricane Sandy). Over the period of 519 days reviewed, the reported TSS results separate into 73 daily composite analyses without filter bypasses and 70 which included at least a partial filter bypass. The bypasses lasted anywhere from several hours to greater than a month following damage by Hurricane Sandy, and include both partial and full flow bypasses.

The TSS concentration averaged 9 mg/l for full flow through the filters and 7 mg/l for days with at least partial filter bypasses. For comparison against the monthly permit limit of 1,360 kg/d, the stormwater allocation adjusted monthly average loads were 253 kg/d for full flow through the filters and 164 kg/d for days with at least partial filter bypasses. For comparison against the daily maximum permit limit of 2,520 kg/d, the stormwater allocation adjusted daily maximum load was 972 kg for full flow through the filters and 1,842 kg/d for days with at least partial filter bypasses (the maximum load occurred on August 28, 2011 during the onset of Hurricane Irene). Based on the data, there were 10 months with no filter bypasses, 7 months with at least one day with a filter bypass, and all of November 2012 with no filter capacity due to hurricane Sandy. If NJAC 7:14A-6:10 requirements were not specifically addressed within the existing permit, this would have generated 70 calls to the NJDEP Hotline, likely 70 local agency visits to the Bayway Refinery, and over 20 confirmation letters to NJDEP if consecutive bypass days were addressed in a common letter. More importantly, Bayway Refinery would have been forced to attempt to operate the WWTP with the objective of avoiding a filter bypass rather than the objective of ensuring the best overall effluent quality while avoiding an environmental incident.

To summarize, we note that the existing permit wording is not an exemption from NJAC 7:14A-6.10. The existing wording provides clarification that NJAC 7:14A-6.10 does not apply to this scenario because there is no “noncompliance” when treated wastewater bypassing a tertiary filter process is in compliance with the TSS permit limit. Bayway Refinery feels very strongly about the need to retain this condition within the permit. It is much more than a question of phone calls and letters. It directly affects Bayway Refinery’s ability to operate and maintain the WWTP in a proper and efficient manner that is environmentally beneficial.

Response:

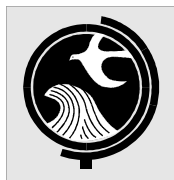
In this comment the permittee is requesting that the following language be included in the final permit where similar language had been included in the 1993 permit:

The permittee has a final filtration process that may be utilized if needed to attain compliance with the TSS limitations for DSN 002A. If the effluent meets the TSS limitations and the filtration process is bypassed, the permittee does not need to contact the DEP Hotline to report the filter bypass. The permittee is only required to report the bypass to the DEP Hotline if the TSS limitations are exceeded. When the filters are bypassed, the permittee shall analyze a DSN 002A sample for TSS to demonstrate compliance with the TSS limitations and include the result on the DMR with a comment explaining the extra TSS analysis.

N.J.A.C. 7:14A-6.10 is the relevant regulation for bypass conditions. The permittee is correct in that this section of the regulation is entitled “Noncompliance Reporting” but contains requirements for anticipated and unanticipated bypasses. The Department also recognizes that the permittee is requesting the ability to not report an anticipated or unanticipated bypass as long as the effluent remains in compliance. In other words, the permittee objects to the need to contact the DEP Hotline when the tertiary filtration process is bypassed.

The Department does not agree that the NJPDES Regulations support the inclusion of this specialized language for a number of reasons. First, N.J.A.C. 7:14A-6.10(d) requires permittees to report any bypass of treatment units to the DEP Hotline. Note that this regulation does not state that the permittee cannot bypass the treatment system but rather that the Department must be notified of any bypass. Therefore, the Department does not agree that the permittee’s operational flexibility is hampered by not including this condition. Secondly, all permittees are held to this same regulatory requirement. To specifically exclude Bayway through inclusion of specialized language would be inappropriate. Third, N.J.A.C. 7:14A-6.12(a) provides that “a permittee shall, at all times, maintain in good working order and operate the treatment works and facilities which are installed or used by the permittee to achieve compliance with the terms and conditions of the discharge permit.” The tertiary system is part of the treatment works, and it was installed “to achieve compliance” with the TSS limits. Therefore, it should be operated at all times unless a bypass is deemed acceptable for maintenance purposes or during heavy storm events. The Department maintains that notification of any bypass events is appropriate.

No change to the permit has been made to the final permit as a result of this comment.



NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

Permit Number: NJ0001511

Draft: Consolidated Renewal Permit Action

Permittee:

Phillips 66 Company
1400 Park Ave
Linden, NJ 07036

Co-Permittees:

ExxonMobil Corp.	Infineum USA LP
P.O. Box 728	1900 E. Linden Ave
Linden, NJ 07036	Linden, NJ 07036

Property Owner:

Phillips 66 Company
1400 Park Ave
Linden, NJ 07036

Location Of Activity:

Phillips 66 Company
1400 Park Ave
Linden, Union County

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
B - Industrial Wastewater - Renewal	07/11/2013	10/01/2013	09/30/2018

By Authority of:

Commissioner's Office

DEP AUTHORIZATION
Pilar Patterson, Chief
Bureau of Surface Water Permitting
Division of Water Quality

(Terms, conditions and provisions attached hereto)

Division of Water Quality

PART I GENERAL REQUIREMENTS: NJPDES

A. General Requirements of all NJPDES Permits

1. Requirements Incorporated by Reference

- a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.
- b. General Conditions
 - Penalties for Violations N.J.A.C. 7:14-8.1 et seq.
 - Incorporation by Reference N.J.A.C. 7:14A-2.3
 - Toxic Pollutants N.J.A.C. 7:14A-6.2(a)4i
 - Duty to Comply N.J.A.C. 7:14A-6.2(a)1 & 4
 - Duty to Mitigate N.J.A.C. 7:14A-6.2(a)5 & 11
 - Inspection and Entry N.J.A.C. 7:14A-2.11(e)
 - Enforcement Action N.J.A.C. 7:14A-2.9
 - Duty to Reapply N.J.A.C. 7:14A-4.2(e)3
 - Signatory Requirements for Applications and Reports N.J.A.C. 7:14A-4.9
 - Effect of Permit/Other Laws N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
 - Severability N.J.A.C. 7:14A-2.2
 - Administrative Continuation of Permits N.J.A.C. 7:14A-2.8
 - Permit Actions N.J.A.C. 7:14A-2.7(c)
 - Reopener Clause N.J.A.C. 7:14A-6.2(a)10
 - Permit Duration and Renewal N.J.A.C. 7:14A-2.7(a) & (b)
 - Consolidation of Permit Process N.J.A.C. 7:14A-15.5
 - Confidentiality N.J.A.C. 7:14A-18.2 & 2.11(g)
 - Fee Schedule N.J.A.C. 7:14A-3.1
 - Treatment Works Approval N.J.A.C. 7:14A-22 & 23
- c. Operation And Maintenance
 - Need to Halt or Reduce not a Defense N.J.A.C. 7:14A-2.9(b)
 - Proper Operation and Maintenance N.J.A.C. 7:14A-6.12
- d. Monitoring And Records
 - Monitoring N.J.A.C. 7:14A-6.5
 - Recordkeeping N.J.A.C. 7:14A-6.6
 - Signatory Requirements for Monitoring Reports N.J.A.C. 7:14A-6.9
- e. Reporting Requirements
 - Planned Changes N.J.A.C. 7:14A-6.7
 - Reporting of Monitoring Results N.J.A.C. 7:14A-6.8
 - Noncompliance Reporting
 - Hotline/Two Hour & Twenty-four Hour Reporting N.J.A.C. 7:14A-6.10 & 6.8(h)
 - Written Reporting N.J.A.C. 7:14A-6.10(c) & (d)
 - Duty to Provide Information N.J.A.C. 7:14A-6.10(e) & (f) & 6.8(h)
 - Schedules of Compliance N.J.A.C. 7:14A-2.11, 6.2(a)14 & 18.1
 - Transfer N.J.A.C. 7:14A-6.4
 - N.J.A.C. 7:14A-6.2(a)8 & 16.2

PART II

GENERAL REQUIREMENTS: DISCHARGE CATEGORIES

A. Additional Requirements Incorporated By Reference

1. Requirements for Discharges to Surface Waters

- a. In addition to conditions in Part I of this permit, the conditions in this section are applicable to activities at the permitted location and are incorporated by reference. The permittee is required to comply with the regulations which are in effect as of the effective date of the final permit.
 - i. Surface Water Quality Standards N.J.A.C. 7:9B-1
 - ii. Water Quality Management Planning Regulations N.J.A.C. 7:15

B. General Conditions

1. Scope

- a. The issuance of this permit shall not be considered as a waiver of any applicable federal, state, and local rules, regulations and ordinances.

2. Permit Renewal Requirement

- a. Permit conditions remain in effect and enforceable until and unless the permit is modified, renewed or revoked by the Department.
- b. Submit a complete permit renewal application: 180 days before the Expiration Date.

3. Notification of Non-Compliance

- a. The permittee shall notify the Department of all non-compliance when required in accordance with N.J.A.C. 7:14A-6.10 by contacting the DEP HOTLINE at 1-877-WARNDEP (1-877-927-6337).
- b. The permittee shall submit a written report as required by N.J.A.C. 7:14A-6.10 within five days.

4. Notification of Changes

- a. The permittee shall give written notification to the Department of any planned physical or operational alterations or additions to the permitted facility when the alteration is expected to result in a significant change in the permittee's discharge and/or residuals use or disposal practices including the cessation of discharge in accordance with N.J.A.C. 7:14A-6.7.
- b. Prior to any change in ownership, the current permittee shall comply with the requirements of N.J.A.C. 7:14A-16.2, pertaining to the notification of change in ownership.

5. Access to Information

- a. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to enter upon a person's premises, for purposes of inspection, and to access / copy any records that must be kept under the conditions of this permit.

6. Operator Certification

- a. Pursuant to N.J.A.C. 7:10A-1.1 et seq. every wastewater system not exempt pursuant to N.J.A.C. 7:10A-1.1(b) requires a licensed operator. The operator of a system shall meet the Department's requirements pursuant to N.J.A.C. 7:10A-1.1 and any amendments. The name of the proposed operator, where required shall be submitted to the Department at the address below, in order that his/her qualifications may be determined prior to initiating operation of the treatment works.
 - i. Notifications shall be submitted to:
NJDEP
Examination and Licensing Unit
Mailcode 401-02B
P.O. Box 420
Trenton, New Jersey 08625-0420
(609)777-1012.
- b. The permittee shall notify the Department of any changes in licensed operator within two weeks of the change.

7. Operation Restrictions

- a. The operation of a waste treatment or disposal facility shall at no time create: (a) a discharge, except as authorized by the Department in the manner and location specified in Part III of this permit; (b) any discharge to the waters of the state or any standing or ponded condition for water or waste, except as specifically authorized by a valid NJPDES permit.

8. Residuals Management

- a. The permittee shall comply with land-based sludge management criteria and shall conform with the requirements for the management of residuals and grit and screenings under N.J.A.C. 7:14A-6.15(a), which includes:
 - i. Standards for the Use or Disposal of Residual, N.J.A.C. 7:14A-20;
 - ii. Section 405 of the Federal Act governing the disposal of sludge from treatment works treating domestic sewage;
 - iii. The Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the Solid Waste Management Rules, N.J.A.C. 7:26;
 - iv. The Sludge Quality Assurance Regulations, N.J.A.C. 7:14C;
 - v. The Statewide Sludge Management Plan promulgated pursuant to the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.; and
 - vi. The provisions concerning disposal of sewage sludge and septage in sanitary landfills set forth at N.J.S.A. 13:1E-42 and the Statewide Sludge Management Plan.
 - vii. Residual that is disposed in a municipal solid waste landfill unit shall meet the requirements in 40 CFR Part 258 and/or N.J.A.C. 7:26 concerning the quality of residual disposed in a municipal solid waste landfill unit. (That is, passes the Toxicity Characteristic Leaching Procedure and does not contain "free liquids" as defined at N.J.A.C. 7:14A-1.2.)

- b. If any applicable standard for residual use or disposal is promulgated under section 405(d) of the Federal Act and Sections 4 and 6 of the State Act and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Department may modify or revoke and reissue the permit to conform to the standard for residual use or disposal.
- c. The permittee shall make provisions for storage, or some other approved alternative management strategy, for anticipated downtimes at a primary residual management alternative. The permittee shall not be permitted to store residual beyond the capacity of the structural treatment and storage components of the treatment works. N.J.A.C. 7:14A-20.8(a) and N.J.A.C. 7:26 provide for the temporary storage of residuals for periods not exceeding six months, provided such storage does not cause pollutants to enter surface or ground waters of the State. The storage of residual for more than six months is not authorized under this permit. However, this prohibition does not apply to residual that remains on the land for longer than six months when the person who prepares the residual demonstrates that the land on which the residual remains is not a surface disposal site or landfill. The demonstration shall explain why residual must remain on the land for longer than six months prior to final use or disposal, discuss the approximate time period during which the residual shall be used or disposed and provide documentation of ultimate residual management arrangements. Said demonstration shall be in writing, be kept on file by the person who prepares residual, and submitted to the Department upon request.
- d. The permittee shall comply with the appropriate adopted District Solid Waste or Sludge Management Plan (which by definition in N.J.A.C. 7:14A-1.2 includes Generator Sludge Management Plans), unless otherwise specifically exempted by the Department.
- e. The preparer must notify and provide information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements to the person who applies bulk residual to the land. This shall include, but not be limited to, the applicable recordkeeping requirements and certification statements of 40 CFR 503.17 as referenced at N.J.A.C. 7:14A-20.7(j).
- f. The preparer who provides biosolids to another person who further prepares the biosolids for application to the land must provide this person with notification and information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements.
- g. Any person who prepares bulk residual in New Jersey that is applied to land in a State other than New Jersey shall comply with the requirement at N.J.A.C. 7:14A-20.7(b)1.ix to submit to the Department written proof of compliance with or satisfaction of all applicable statutes, regulations, and guidelines of the state in which land application will occur.

PART III

LIMITS AND MONITORING REQUIREMENTS

MONITORED LOCATION GROUP: Cooling Water Ditches

Monitored Location Group Members

003A SW Outfall DSN 003A, 004A SW Outfall DSN 004A, 005A SW Outfall DSN 005A

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final

PHASE Start Date: 10/01/2013

PHASE End Date:

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GPD	*****	*****	*****	*****	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
IC25 Statre 7day Chr Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/6 Months	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.1	0.1			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Nickel, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	***	***		***	10	10			
Zinc, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	***	***		***	30	30			
Lead, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	***	***		***	10	10			
Copper, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	RQL	***	***		***	10	10			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Mercury Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
	RQL	***	***		***	1.0	1.0			
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Quarter	Grab
	RQL	***	***		***	30	30			
Benzene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
	RQL	***	***		***	7	7			

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chromium Trivalent (as Cr) Total Recov.	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Arsenic, Total Recoverable (as As)	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Selenium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	Grab	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
Chromium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Chromium, Hexavalent Dissolved (as Cr)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Acenaphthylene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Acenaphthene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Benzo(k)fluoranthene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT RQL = 26.5	UG/L	Grab	January thru December
Bis (2-chloroiso- propyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Chrysene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Diphenyl- hydrazine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Fluoranthene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Fluorene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorocyclo- pentadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Hexachloroethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Indeno(1,2,3-cd)-pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Isophorone	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodiphenyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodimethyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Nitrobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Phenanthrene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,2,4-Trichloro-benzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dibenzo(a,h)anthracene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
1,4-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,6-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Naphthalene	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzidine	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Hexachlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Mirex	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Carbon Tetrachloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT RQL = 3	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Chloroform	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Toluene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Chlorobenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methyl Bromide	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Methyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Tetrachloroethylene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Trichlorofluoro-methane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT RQL = 23.5	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,1-Trichloro-ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2-Trichloro-ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro-ethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,2-trans-Dichloro-ethylene	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Trichloroethylene	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Methoxychlor	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-Nitrosodi- n-butylamine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m- cresol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4,5-Trichloro- phenol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT RQL = 0.08	UG/L	Grab	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endrin Aldehyde	Effluent Gross Value	REPORT RQL = 0.1	UG/L	Grab	January thru December
2,3,7,8-Tetrachloro- dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT RQL = 0.06	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha BHC	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Beta BHC	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Chlordane	Effluent Gross Value	REPORT RQL = 0.2	UG/L	Grab	January thru December
Dieldrin	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Endrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Toxaphene	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December
Heptachlor	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT RQL = 0.4	UG/L	Grab	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Surface Water WCR - Semi Annual Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
2-Nitrophenol	Effluent Gross Value	REPORT RQL = 18	UG/L	Grab	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT RQL = 13.5	UG/L	Grab	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
2,4,6-Trichloro-phenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 21	UG/L	Grab	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT RQL = 12	UG/L	Grab	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December
Phenol Single Compound	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

MONITORED LOCATION:

001A SW Outfall DSN 001A

RECEIVING STREAM:

Morses Creek

STREAM CLASSIFICATION:

SE3(C2)

DISCHARGE CATEGORY(IES):

B - Industrial Wastewater

Location Description

Sampling for parameters shall be performed at the overflow from Dam #1 to Lower Morses Creek at Lat. = 40d 38' 03.3" and Long. = 74d 12' 20.8".

Contributing Waste Types

Condensate, Cooling tower blowdown, Groundwater Remediation, Non-contact Cooling Water, Process Water, Storm Water Runoff, Unprocessed water

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

Oil & Grease can be analyzed by EPA Method 1664A or equivalent method. The permittee shall report the results under the Oil & Grease.

Net values are based on effluent gross value minus cooling water intake load and stormwater derived loading as monitored past Dam #2.

Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Monthly Minimum	*****	9.0 Monthly Maximum	SU	1/Week	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Intake	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

Oil & Grease can be analyzed by EPA Method 1664A or equivalent method. The permittee shall report the results under the Oil & Grease.

Net values are based on effluent gross value minus cooling water intake load and stormwater derived loading as monitored past Dam #2.

Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total Suspended January thru December	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Week	24 Hour Composite
	QL	***	***		***	***	***			
Solids, Total Suspended January thru December	Effluent Net Value	*****	*****	*****	*****	30 Monthly Average	50 Daily Maximum	MG/L	1/Week	Calculated
	QL	***	***		***	***	***			
Oil and Grease January thru December	Intake	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	Grab
	QL	***	***		***	***	***			
Oil and Grease January thru December	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	Grab
	QL	***	***		***	***	***			
Oil and Grease January thru December	Effluent Net Value	REPORT Monthly Average	2260 Daily Maximum	KG/DAY	*****	10 Monthly Average	15 Daily Maximum	MG/L	3/Week	Calculated
	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia January thru December	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
	AL	***	***		50	***	***			
Chlorine Produced Oxidants January thru December	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	3/Week	Grab
	MDL	***	***		***	0.1	0.1			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

Oil & Grease can be analyzed by EPA Method 1664A or equivalent method. The permittee shall report the results under the Oil & Grease.

Net values are based on effluent gross value minus cooling water intake load and stormwater derived loading as monitored past Dam #2.

Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temperature, oC	Intake	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	35 Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Intake	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Net Value	REPORT Monthly Average	6241 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	2300 Daily Maximum	MBTU/HR	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Temp. Diff. between Intake and Discharge	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	15 Daily Maximum	DEG.C	Continuous	Calculated
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

Oil & Grease can be analyzed by EPA Method 1664A or equivalent method. The permittee shall report the results under the Oil & Grease.

Net values are based on effluent gross value minus cooling water intake load and stormwater derived loading as monitored past Dam #2.

Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
1,2-Dichlorobenzene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.05 Daily Maximum	MG/L	1/Quarter	Grab
January thru December	RQL	***	***		***	0.009	0.009			
1,4-Dichlorobenzene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.05 Daily Maximum	MG/L	1/Quarter	Grab
January thru December	RQL	***	***		***	0.02	0.02			
Toluene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.05 Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Benzene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.05 Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.007	0.007			
Ethylbenzene	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.05 Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.006	0.006			

MONITORED LOCATION:

002A SW Outfall DSN 002A

RECEIVING STREAM:

Morses Creek

STREAM CLASSIFICATION:

SE3(C2)

DISCHARGE CATEGORY(IES):

B - Industrial Wastewater

Location Description

Sampling shall be performed after the last treatment step at the Parshall Flume before the final discharge into Morses Creek at DSN 002A. The final discharge location of DSN 002A into Morses Creek is located at Lat. = 40d 37' 45.3" and Long. = 74d 13' 31.4".

Contributing Waste Types

Groundwater Remediation, OCPSF process waste, Petro Ref ELG process H2O, Process Water, Storm Water Runoff

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Precipitation	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Effl. Adjusted Value	1085 Monthly Average	2088 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Week	Calculated
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
BOD, 5-Day (20 oC)	Calculated Adjust.	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Week	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Monthly Minimum	*****	9.0 Monthly Maximum	SU	1/Week	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effl. Adjusted Value	954 Monthly Average	1843 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Week	Calculated
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Calculated Adjust.	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Week	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	10 Monthly Average	15 Daily Maximum	MG/L	3/Week	Grab
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effl. Adjusted Value	298 Monthly Average	558 Daily Maximum	KG/DAY	*****	*****	*****	*****	3/Week	Calculated
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Oil and Grease	Calculated Adjust.	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	*****	*****	*****	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	525 Monthly Average	1155 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	AL	***	***		50	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effl. Adjusted Value	2388 Monthly Average	4597 Daily Maximum	KG/DAY	*****	*****	*****	*****	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Calculated Adjust.	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	*****	*****	*****	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
Sulfide, Total (as S)	Effluent Gross Value	4.9 Monthly Average	11 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Phenolics, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Phenolics, Total Recoverable	Effl. Adjusted Value	7.6 Monthly Average	16 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Week	Calculated
January thru December	QL	***	***		***	***	***			
Phenolics, Total Recoverable	Calculated Adjust.	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Week	Calculated
January thru December	QL	***	***		***	***	***			
Cyanide, Total (as CN)	Effluent Gross Value	6.8 Monthly Average	10.0 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	RQL	1.74	1.74		***	0.04	0.04			
Chromium, Hexavalent (as Cr)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Chromium, Hexavalent (as Cr)	Effl. Adjusted Value	0.7 Monthly Average	1.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
Chromium, Hexavalent (as Cr)	Calculated Adjust.	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Month	Calculated
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Chromium, Total (as Cr)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	RQL	0.44	0.44		***	0.01	0.01			
Chromium, Total (as Cr)	Effl. Adjusted Value	11.9 Monthly Average	32.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Month	Calculated
January thru December	RQL	0.44	0.44		***	***	***			
Chromium, Total (as Cr)	Calculated Adjust.	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Month	Calculated
January thru December	RQL	0.44	0.44		***	***	***			
Copper, Total (as Cu)	Effluent Gross Value	6.8 Monthly Average	14.7 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	RQL	0.44	0.44		***	0.01	0.01			
Lead, Total (as Pb)	Effluent Gross Value	5.8 Monthly Average	7.3 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	RQL	0.44	0.44		***	0.01	0.01			
Nickel, Total (as Ni)	Effluent Gross Value	17.1 Monthly Average	26.4 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	RQL	0.44	0.44		***	0.01	0.01			
Zinc, Total (as Zn)	Effluent Gross Value	6.5 Monthly Average	12.9 Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	RQL	1.31	1.31		***	0.03	0.03			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Acenaphthylene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			
Acenaphthene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.41	0.41		***	***	***			
Anthracene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			
Benzo(k)fluoranthene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.87	0.87		***	***	***			
Benzo(a)pyrene	Effluent Gross Value	1.0 Monthly Average	2.7 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.87	0.87		***	***	***			
Chrysene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.87	0.87		***	***	***			
Diethyl phthalate	Effluent Gross Value	3.5 Monthly Average	8.8 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Dimethyl phthalate	Effluent Gross Value	0.8 Monthly Average	2.0 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
	January thru December	RQL	0.44		***	***	***			
Fluoranthene	Effluent Gross Value	1.1 Monthly Average	3.0 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
	January thru December	RQL	0.44		***	***	***			
Fluorene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
	January thru December	RQL	0.44		***	***	***			
Hexachloroethane	Effluent Gross Value	0.9 Monthly Average	2.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
	January thru December	RQL	0.44		***	***	***			
Nitrobenzene	Effluent Gross Value	1.2 Monthly Average	3.0 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
	January thru December	RQL	0.44		***	***	***			
Phenanthrene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
	January thru December	RQL	0.44		***	***	***			
Pyrene	Effluent Gross Value	1.1 Monthly Average	2.9 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
	January thru December	RQL	0.87		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Benzo(a)anthracene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			
1,2-Dichlorobenzene	Effluent Gross Value	3.4 Monthly Average	7.1 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.39	0.39		***	***	***			
1,2,4-Trichlorobenzene	Effluent Gross Value	3.0 Monthly Average	6.1 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			
1,3-Dichlorobenzene	Effluent Gross Value	1.3 Monthly Average	1.9 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.39	0.39		***	***	***			
1,4-Dichlorobenzene	Effluent Gross Value	0.7 Monthly Average	1.2 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.87	0.87		***	***	***			
2,4-Dinitrotoluene	Effluent Gross Value	4.9 Monthly Average	12.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			
2,6-Dinitrotoluene	Effluent Gross Value	11.1 Monthly Average	27.9 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.41	0.41		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Naphthalene	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.35	0.35		***	***	***			
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	4.5 Monthly Average	12.1 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	1.31	1.31		***	***	***			
Di-n-butyl phthalate	Effluent Gross Value	1.2 Monthly Average	2.5 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.87	0.87		***	***	***			
Hexachlorobenzene	Effluent Gross Value	0.7 Monthly Average	1.2 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			
Hexachlorobutadiene	Effluent Gross Value	0.9 Monthly Average	2.1 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			
1,3-Dichloropropene	Effluent Gross Value	1.3 Monthly Average	1.9 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.30	0.30		***	***	***			
3,4 Benzo-fluoranthene	Effluent Gross Value	1.0 Monthly Average	2.7 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Carbon Tetrachloride	Effluent Gross Value	0.8 Monthly Average	1.7 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
	January thru December	RQL	0.26		***	***	***			
1,2-Dichloroethane	Effluent Gross Value	3.0 Monthly Average	9.2 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
	January thru December	RQL	0.13		***	***	***			
Chloroform	Effluent Gross Value	0.9 Monthly Average	2.0 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
	January thru December	RQL	0.22		***	***	***			
Toluene	Effluent Gross Value	1.1 Monthly Average	3.5 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
	January thru December	RQL	0.26		***	***	***			
Benzene	Effluent Gross Value	1.6 Monthly Average	5.9 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
	January thru December	RQL	0.30		***	***	***			
Acrylonitrile	Effluent Gross Value	4.2 Monthly Average	10.5 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
	January thru December	RQL	2.18		***	***	***			
Chlorobenzene	Effluent Gross Value	0.7 Monthly Average	1.2 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
	January thru December	RQL	0.26		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Ethylbenzene	Effluent Gross Value	1.4 Monthly Average	4.7 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.26	0.26		***	***	***			
Methyl Chloride	Effluent Gross Value	3.7 Monthly Average	8.3 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.44	0.44		***	***	***			
Methylene Chloride	Effluent Gross Value	1.7 Monthly Average	3.9 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.26	0.26		***	***	***			
Tetrachloroethylene	Effluent Gross Value	1.0 Monthly Average	2.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.39	0.39		***	***	***			
1,1-Dichloroethane	Effluent Gross Value	1.0 Monthly Average	2.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	1.02	1.02		***	***	***			
1,1-Dichloroethylene	Effluent Gross Value	0.7 Monthly Average	1.1 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.26	0.26		***	***	***			
1,1,1-Trichloro-ethane	Effluent Gross Value	0.9 Monthly Average	2.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.26	0.26		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
1,1,2-Trichloro-ethane	Effluent Gross Value	0.9 Monthly Average	2.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.26	0.26		***	***	***			
1,2-Dichloropropane	Effluent Gross Value	6.7 Monthly Average	10 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.22	0.22		***	***	***			
1,2-trans-Dichloro-ethylene	Effluent Gross Value	0.9 Monthly Average	2.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.17	0.17		***	***	***			
Vinyl Chloride	Effluent Gross Value	4.5 Monthly Average	11.7 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.44	0.44		***	***	***			
Trichloroethylene	Effluent Gross Value	0.9 Monthly Average	2.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	RQL	0.22	0.22		***	***	***			
Chloroethane	Effluent Gross Value	4.5 Monthly Average	11.7 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	Grab
January thru December	QL	***	***		***	***	***			
2-Chlorophenol	Effluent Gross Value	1.3 Monthly Average	4.3 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.87	0.87		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:**Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
2-Nitrophenol	Effluent Gross Value	1.8 Monthly Average	3.0 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.78	0.78		***	***	***			
2,4-Dichlorophenol	Effluent Gross Value	1.7 Monthly Average	4.9 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			
2,4-Dimethylphenol	Effluent Gross Value	0.8 Monthly Average	1.6 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.59	0.59		***	***	***			
2,4-Dinitrophenol	Effluent Gross Value	3.1 Monthly Average	5.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	1.74	1.74		***	***	***			
4-Nitrophenol	Effluent Gross Value	3.1 Monthly Average	5.4 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.52	0.52		***	***	***			
4,6-Dinitro-o-cresol	Effluent Gross Value	3.4 Monthly Average	12.1 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	2.61	2.61		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - C - 1: Surface Water DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Phenol Single Compound	Effluent Gross Value	0.7 Monthly Average	1.1 Daily Maximum	KG/DAY	*****	*****	*****	*****	1/Quarter	24 Hour Composite
January thru December	RQL	0.44	0.44		***	***	***			

MONITORED LOCATION:

SI8A SQAR-Filter Press

DISCHARGE CATEGORY(IES):

B - Industrial Wastewater

Location Description

Once every two calendar months a sludge sample shall be collected at the plate and frame filter press and analyzed pursuant to the Sludge Quality Assurance Regulations (SQAR, N.J.A.C. 7:14C).

Contributing Waste Types

Ind Residual-Other

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	%TS	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Potassium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Calcium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Magnesium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Barium, Total (as Ba)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Boron, Total (as B)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Manganese, Total (as Mn)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Vanadium, Total (as V)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Titanium, Total (as Ti)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Molybdenum Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Phosphorus Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Arsenic, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Cobalt, Total (as Co)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Silver, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Strontium, Total (as Sr)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Antimony, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Tin, Total (as Sn)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Aluminum, Total (as Al)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Selenium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Thallium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Copper, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Beryllium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Cadmium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Zinc, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Lead, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Nickel, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Mercury, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Chromium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Iron, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Acenaphthylene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Acenaphthene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Anthracene Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Benzene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Benzo(k)fluoranthene Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Benzo(a)pyrene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Bis(2-chloroethyl) ether, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Bis(2-chloroethoxy)- methane, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Bis(2-chloroiso- propyl)-ether, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Butyl benzyl- phthalate, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Chrysene Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Diethyl phthalate, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Dimethyl phthalate, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
1,2-Diphenyl- hydrazine, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Fluoranthene Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Fluorene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Hexachlorocyclo- pentadiene, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Hexachloroethane, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Indeno(1,2,3-cd)- pyrene, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
N-nitrosodi-n- propylamine, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
N-nitrosodi- phenylamine, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
N-nitrosodi- methylamine, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Naphthalene Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Nitrobenzene Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Phenanthrene Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Pyrene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Benzo(ghi)perylene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Benzo(a)anthracene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
1,2-Dichlorobenzene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
1,2,4-Trichloro- benzene, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Dibenzo(a,h) anthracene, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
1,3-Dichlorobenzene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
1,4-Dichlorobenzene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
2-Chloronaphthalene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Di-n-octyl Phthalate Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
2,4-Dinitrotoluene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
2,6-Dinitrotoluene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
3,3'-Dichloro- benzidine, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
4-Bromophenyl phenyl ether, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Bis(2-ethylhexyl) phthalate, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Di-n-butyl phthalate Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Benzidine Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Hexachlorobenzene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Hexachlorobutadiene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
3,4 Benzo-fluoranthene	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Bi-Monthly DMR: due 60 calendar days after the end of each calendar bi-monthly period.

Comments:

The permittee can use alternative sludge processing methods as long as the sample is collected after the last step of the sludge treatment process prior to loading for offsite transport.

Table III - D - 1: Residuals DMR Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Ethylbenzene Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Toluene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Xylene, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Cyanide, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
Isophorone Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			
4-Chlorophenyl phenyl ether, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/2 Months	Composite
January thru December	QL	***	***		***	***	***			

Residuals WCR - Annual Reporting Requirements:

Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Comments:

The frequency of reporting for the Residuals Waste Characterization Report changes from monthly to annually at the beginning of the calendar year after the effective date of the permit.

Table III - D - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final PHASE Start Date: 10/01/2013 PHASE End Date:

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Amt Sludge Rmvd, Wet Cubic Yards	Industrial Residuals	REPORT	WCY/YR	Calculated	January thru December
Amt Sludge Rmvd, Wet Metric Tons	Industrial Residuals	REPORT	WMT/YR	Calculated	January thru December
Amt Sludge Rmvd, Gallons	Industrial Residuals	REPORT	GAL/YEAR	Calculated	January thru December
Total Amount of Sludge Removed	Industrial Residuals	REPORT	DMT/YR	Calculated	January thru December
Solids, Total	Industrial Residuals	REPORT	%TS	Composite	January thru December

Residuals WCR - Monthly Reporting Requirements:

Submit a Monthly WCR: due 60 calendar days after the end of each calendar month.

Comments:

The frequency of reporting for the Residuals Waste Characterization Report changes from monthly to annually at the beginning of the calendar year after the effective date of the permit.

Table III - D - 4: Residuals WCR - Monthly Limits and Monitoring Requirements

PHASE: Final PHASE Start Date: 10/01/2013 PHASE End Date:

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Sludge Landfilled	Industrial Residuals	REPORT	DMT/MO	Calculated	January thru December

Residuals WCR - Monthly Reporting Requirements:

Submit a Monthly WCR: due 60 calendar days after the end of each calendar month.

Comments:

The frequency of reporting for the Residuals Waste Characterization Report changes from monthly to annually at the beginning of the calendar year after the effective date of the permit.

Table III - D - 4: Residuals WCR - Monthly Limits and Monitoring Requirements**PHASE:** Final**PHASE Start Date:** 10/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Sludge Land Applied	Industrial Residuals	REPORT	DMT/MO	Calculated	January thru December
Sludge Disposed Out-of-State	Industrial Residuals	REPORT	DMT/MO	Calculated	January thru December
Amt Sludge Rmvd, Wet Cubic Yards	Industrial Residuals	REPORT	WCY/MO	Calculated	January thru December
Amt Sludge Rmvd, Wet Metric Tons	Industrial Residuals	REPORT	WMT/MO	Calculated	January thru December
Amt Sludge Rmvd, Gallons	Industrial Residuals	REPORT	GAL/MON	Calculated	January thru December
Sludge Bene Use Out-of-State	Industrial Residuals	REPORT	DMT/MO	Calculated	January thru December
Sludge Surface Disposed	Industrial Residuals	REPORT	DMT/MO	Calculated	January thru December
Total Amount of Sludge Removed	Industrial Residuals	REPORT	DMT/MO	Calculated	January thru December
Sludge Incinerated	Industrial Residuals	REPORT	DMT/MO	Calculated	January thru December
Sludge Disposed- Other Methods	Industrial Residuals	REPORT	DMT/MO	Calculated	January thru December
Sludge/Septage Rcvd Offsite Srces Wet MT	Industrial Residuals	REPORT	WMT/MO	Calculated	January thru December
Sludge/Septage Rcvd Offsite Srces Gals	Industrial Residuals	REPORT	GAL/MON	Calculated	January thru December
Sludge/Septage Rcvd Offsite Srces Wt Yd3	Industrial Residuals	REPORT	WCY/MO	Calculated	January thru December

Residuals WCR - Monthly Reporting Requirements:
Submit a Monthly WCR: due 60 calendar days after the end of each calendar month.

Comments:
The frequency of reporting for the Residuals Waste Characterization Report changes from monthly to annually at the beginning of the calendar year after the effective date of the permit.

Table III - D - 4: Residuals WCR - Monthly Limits and Monitoring Requirements
PHASE:Final **PHASE Start Date:** 10/01/2013 **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Solids, Total	Industrial Residuals	REPORT	%TS	Composite	January thru December

Residuals Transfer Reporting Requirements:

Submit a Monthly RTR: due 60 calendar days after the end of each calendar month.

PART IV

SPECIFIC REQUIREMENTS: NARRATIVE

Industrial Wastewater

A. MONITORING REQUIREMENTS

1. Standard Monitoring Requirements

- a. Each analysis required by this permit shall be performed by a New Jersey Certified Laboratory that is certified to perform that analysis.
- b. The Permittee shall perform all water/wastewater analyses in accordance with the analytical test procedures specified in 40 CFR 136 unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.
- c. The permittee shall utilize analytical methods that will ensure compliance with the Quantification Levels (QLs) listed in PART III. QLs include, but are not limited to, Recommended Quantification Levels (RQLs) and Method Detection Levels (MDLs). If the permittee and/or contract laboratory determines that the QLs achieved for any pollutant(s) generally will not be as sensitive as the QLs specified in PART III, the permittee must submit a justification of such to the Bureau of Surface Water Permitting. For limited parameters with no QL specified, the sample analysis shall use a detection level at least as sensitive as the effluent limit.
- d. All sampling shall be conducted in accordance with the Department's Field Sampling Procedures Manual, or an alternate method approved by the Department in writing.
- e. All monitoring shall be conducted as specified in Part III.
- f. All sample frequencies expressed in Part III are minimum requirements. Any additional samples taken consistent with the monitoring and reporting requirements contained herein shall be reported on the Monitoring Report Forms.
- g. Annual and semi-annual wastewater testing shall be conducted in a different quarter of each year so that tests are conducted in each of the four permit quarters of the permit cycle. Testing may be conducted during any month of the permit quarters.
- h. Monitoring for Wastewater Characterization Report parameters shall be conducted concurrently with the Whole Effluent Toxicity (WET) monitoring, when feasible.
- i. Any influent and effluent sampling for toxic pollutant analyses shall be collected concurrently.
- j. The permittee shall perform all residual analyses in accordance with the analytical test procedures specified in 40 CFR 503.8 and the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C) unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.

Industrial Wastewater

- k. Intake flow for DSN 001A shall be measured at the salt water pump station using a calculated method.

Effluent Flow shall be measured using a flow meter for DSN 001A and DSN 002A. Flow shall be calculated for DSN 003A, DSN 004A, and DSN 005A using the calculated stormwater runoff during rain events during the monitoring period and calculated cooling water flows based on the process units in service during the monitoring period.

- l. The net amount of heat per unit time shall be calculated by multiplying heat capacity, discharge flow, and discharge-intake temperature difference.
- m. Net concentration limitations for DSN 001A shall be calculated by using the following formula:
$$\frac{[(\text{gross effluent concentration}) * (\text{gross effluent flow}) - (\text{intake concentration}) * (\text{intake flow})]}{[\text{gross effluent flow}]}$$

The permittee is eligible for intake credit only for the Arthur Kill intake water. Any pollutants present in the Dam #2 overflow do not meet the provisions at N.J.A.C. 7:14A-13.4; therefore, the permittee can pursue an affirmative defense if a violation occurs from Dam #2 pollutant contributions.

- n. Automatic composite samplers and flow-weighted samples are preferred for both DSN 001A and DSN 002A. However, 24-hour composite samples collected at each monitoring point may be time proportioned consisting of a minimum of 6 aliquots or grab samples collected at equal time intervals (e.g., every 4 hours when 6 samples are planned to be collected).

B. RECORDKEEPING

1. Standard Recordkeeping Requirements

- a. The permittee shall retain records of all monitoring information, including 1) all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation (if applicable), 2) copies of all reports required by this NJPDES permit, 3) all data used to complete the application for a NJPDES permit, and 4) monitoring information required by the permit related to the permittee's residual use and/or disposal practices, for a period of at least 5 years, or longer as required by N.J.A.C. 7:14A-20, from the date of the sample, measurement, report, application or record.
- b. Records of monitoring information shall include 1) the date, locations, and time of sampling or measurements, 2) the individual(s) who performed the sampling or measurements, 3) the date(s) the analyses were performed, 4) the individual(s) who performed the analyses, 5) the analytical techniques or methods used, and 6) the results of such analyses.

C. REPORTING

1. Standard Reporting Requirements

- a. The permittee shall submit all required monitoring results to the Department on the forms provided to them. The Monitoring Report Forms (MRFs) may be provided to the permittee in either a paper format or in an electronic file format. Unless otherwise noted, all requirements below pertain to both paper and electronic formats.
- b. Any MRFs in paper format shall be submitted to the following addresses:

- i. NJDEP
Division of Water Quality
Bureau of Permit Management Mailcode 401-02B
P.O. Box 420
Trenton, New Jersey 08625-0420.
- ii. (if requested by the Water Compliance and Enforcement Bureau)
NJDEP: Central Bureau of Water Compliance and Enforcement
P.O. Box 407
Trenton, New Jersey 08625-0407
- c. Any electronic data submission shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee. Paper copies must be available for on-site inspection by DEP personnel or provided to the DEP upon written request.
- d. All monitoring report forms shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the discharging facility.
- e. The highest ranking official may delegate responsibility to certify the monitoring report forms in his or her absence. Authorizations for other individuals to sign shall be made in accordance with N.J.A.C. 7:14A-4.9(b).
- f. Monitoring results shall be submitted in accordance with the current Discharge Monitoring Report Manual and any updates thereof.
- g. If monitoring for a parameter is not required in a monitoring period, the permittee must report "CODE=N" for that parameter.
- h. If there are no discharge events during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results. This is accomplished by placing a check mark in the "No Discharge this monitoring period" box on the paper or electronic version of the monitoring report submittal form.

2. Contaminated Stormwater Allocation

- a. The USEPA Petroleum Refining Point Source Category Effluent Limitation Guidelines and Standards (ELGs), 40 CFR Part 419.22 (e), provide for permittees to receive an additional allocation for treating contaminated stormwater for BOD5, TOC, TSS, Oil and Grease, Phenolic Compounds, Total Chromium and Hexavalent Chromium prior to discharge to a surface waterbody. As the ELG's only establish credit for treated stormwater discharges, the permittee must route any stormwater through the treatment plant during the monitoring period, and subsequently discharge it through outfall DSN 002A, to be eligible for this credit.

The additional allocation is incorporated by using equations to calculate the reported mass discharge values considering the contribution of contaminants from the stormwater. Therefore, the permittee's discharge limits for these parameters at DSN 002A are always the same; however, credit for stormwater is applied when the permittee calculates its individual discharge amount for each parameter on its DMR. The permittee is required to monitor the stormwater flow and report this value on its monthly DMR's under the "Flow, In Conduit or thru Treatment Plant" parameter for DSN 002A where the Sample Point is specified as "Precipitation".

In the event that there is no stormwater flow routed through the treatment plant, a credit does not apply and the "Calculated Adjustment" value is zero.

- b. The allocation is calculated by using the following formula:

Mass Load For Pollutants (kg/d) =
(Stormwater Flow Rate, kgal/day) from DSN 002A x (Effluent Limit Factor for Pollutant, lb/k
gal) / 2.2 lbs/kg

The effluent limit factors from 40 CFR 419.23 are summarized below:

BAT effluent limitations for contaminated runoff in English units (pounds per 1,000 gallons of flow)

Pollutant	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
BOD5	0.40	0.22
TSS	0.28	0.18
TOC	0.88	0.48
Oil and Grease	0.13	0.067
Phenolic compounds (4AAP)	0.0029	0.0014
Total chromium	0.0050	0.0018
Hexavalent chromium	0.00052	0.00023
pH range (S.U.)	6.0-9.0	6.0-9.0.

- c. After calculating the loading allocation value and reporting such on the DMR for DSN 002A under "Calculated Adjustment", the permittee shall subtract this loading allocation due to stormwater from the actual gross loading leaving the treatment plant that is reported on the DMR for DSN 002A under "Effluent Gross Value". This value will represent the calculated process wastewater loadings and shall be reported on the DMR form for DSN 002A under the sampling location of "Effluent Adjusted Value". In other words, the following equation should be utilized:

Effluent Adjusted Value = Effluent Gross Value - Calculated Adjustment.

D. SUBMITTALS

1. Standard Submittal Requirements

- a. The permittee shall amend the Operation & Maintenance Manual whenever there is a change in the treatment works design, construction, operations or maintenance which substantially changes the treatment works operations and maintenance procedures.

2. Dilution Studies

- a. The permittee shall determine, the critical instream waste concentration (IWC) for the discharge from the facility for outfall DSN 002A into the receiving water utilizing applicable scientific methods, including, but not limited to, plume models, and may include field verification. The following USEPA plume models are readily available from National Technical Information Service (NTIS) and are acceptable for compliance with this item:

- | | | |
|-----------|---------|-----------------------|
| 1. PLUME | 5. LINE | 8. MOBEM |
| 2. OUTPLM | 6. PDS | 9. PSY |
| 3. DKHDEN | 7. PDSM | 10. CORMIX 1, 2 and 3 |
| 4. MERGE | | |

CORMIX 1, 2, and 3 are available from the Center for Exposure Assessment Modeling, USEPA Region IV, Athens, Georgia. The remaining models are available from NTIS. Use of other models may not be acceptable and would require prior approval from NJDEP.

- b. Submit a Dilution Study Workplan: within 12 months from the effective date of the permit (EDP).
- c. Submit the Dilution Study Final Report: within 36 months from the effective date of the permit (EDP).

3. Polychlorinated Biphenyls (PCB) Monitoring for DSN 002A

- a. The permittee shall perform sampling for the 209 PCB congeners within 24 months after the effective date of the permit.
- i. The permittee shall perform six representative samples on the facility's main outfall, DSN 002A.
 - ii. All samples shall be collected at least 30 days after the previous sampling event. No more than two samples shall be collected in each quarter of the year or the same quarter of the following year.
 - iii. All samples shall be performed during periods which are representative of normal facility operations.
 - iv. All sampling shall be performed using the most recent version of USEPA Method 1668, Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRGC/HRMS, as found at EPA 40 CFR Part 136.
 - v. Samples shall be 24-hour time-weighted composite samples at a frequency of not greater than one aliquot every hour for a nominal sample volume of 2 liters for both the sample and the field replicate.
 - vi. Submit the special report: within 30 months from the effective date of the permit (EDP).
 - vii. The Final Report shall be submitted in electronic format on a compact disc in EXCEL format and shall include a summary report.
 - viii. Final Reports shall be submitted to: Attn:
Melisse Carasia Auriti
Bureau of Surface Water Permitting
New Jersey Department of Environmental Protection
Mailcode: 401-02B
401 East State Street,
PO Box 420, Trenton, NJ 08625-0420

- b. Frequency Reduction, Suspension, Elimination of Monitoring
 - i. If sampling demonstrates non-detectable levels in the effluent, the permittee may request a frequency reduction of the monitoring.
 - ii. If the Department determines that a PMP will be necessary for its facility, the permittee may contact the Department about the possibility of eliminating the sampling described above.
- c. PCB Pollutant Minimization Plan (PMP) Requirement
 - i. If, based on the review of the Final Report, the Department determines that a PMP is required, the permittee shall prepare and submit a PMP to the Department by the date specified in the Department's determination letter.
 - ii. The permittee shall implement the PMP within 30 days after written notification by the Department that the PMP is complete.
 - iii. The PMP shall be developed to achieve maximum practical reduction in accordance with the PMP Technical Manual.
- d. PCB PMP Annual Report Requirement
 - i. The permittee shall submit an annual report in accordance with the Annual Report Guidance Document every 12 months from the implementation of the PMP.
 - ii. Any revisions to the PMP as a result of the ongoing work shall be reported in the annual report.
 - iii. The annual report shall contain, at a minimum, a detailed discussion of the specific progress and actions taken by the permittee during the previous twelve month period that addresses PCB loadings and implementation of the PMP.

E. FACILITY MANAGEMENT

1. Discharge Requirements

- a. The permittee shall discharge at the location(s) specified in PART III of this permit.
- b. The permittee shall not discharge foam or cause foaming of the receiving water that: 1) Forms objectionable deposits on the receiving water, 2) Forms floating masses producing a nuisance, or 3) Interferes with a designated use of the waterbody.
- c. The permittee's discharge shall not produce objectionable color or odor in the receiving stream.
- d. The discharge shall not exhibit a visible sheen at DSN 001A and DSN 002A. If a visible sheen extends beyond the dam at DSN 001A the permittee shall notify the DEP Hotline at 1-877-WARN-DEP.
- e. When quantification levels (QL) and effluent limits are both specified for a given parameter in Part III, and the QL is less stringent than the effluent limit, effluent compliance will be determined by comparing the reported value against the QL.

- f. The Department has approved the permittee's request to use the following corrosion inhibitors, biocides, or other cooling water additives in its non-contact cooling water: sodium bromide, bleach, Clam-Trol CT-2, DTS (inert detoxicant), Bio-Trol 88P, Betz 455 Deposit Control, or similar chemical compounds due to changes in vendors or names.

Approved chemicals specifically for use in the Polypropylene and Infineum Chemical Cooling Tower water include: Phosphate based corrosion inhibitors (Trasar N-23265, N-73282, N-73286 or similar), sodium bromide (Acti-Brom N-7342, Spectrus OX1201 or similar), glutaraldehyde (N-7338 or similar), biodispersant (Spectrus BD1500 or similar), Continuum AEC3157 or similar, Spectrus NX1100 or similar, and bleach".

If the permittee decides to begin using any additional additives in the future, the permittee must notify the Bureau of Surface Water Permitting at least 180 days prior to use so that the permit may be reopened to incorporate any additional limitations deemed necessary.

2. Interstate Environmental Commission

- a. The permittee shall comply with the Interstate Environmental Commission's (IEC) "Water Quality Regulations." Although no monitoring requirements specific to the IEC are included in this permit, compliance may be determined by the IEC based on its own sampling events. IEC effluent requirements shall not be considered effluent limitations for the purpose of mandatory penalties under N.J.S.A. 58:10A-10.1.

3. Applicability of Discharge Limitations and Effective Dates

- a. Surface Water Discharge Monitoring Report (DMR) Form Requirements
- i. The final effluent limitations and monitoring conditions contained in PART III for DSN 001A, DSN 002A, DSN 003A, DSN 004A, and DSN 005A apply for the full term of this permit action.
- b. Wastewater Characterization Report (WCR) Form Requirements
- i. The final effluent monitoring conditions contained in PART III for DSN 003A, DSN 004A, and DSN 005A apply for the full term of this permit action.

4. Operation, Maintenance and Emergency conditions

- a. The permittee shall operate and maintain treatment works and facilities which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit as specified in the Operation & Maintenance Manual.
- b. The permittee shall develop emergency procedures to ensure effective operation of the treatment works under emergency conditions in accordance with NJAC 7:14A-6.12(d).

5. Toxicity Testing Requirements - Acute Whole Effluent Toxicity - DSN 001A and DSN 002A

- a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.
- b. Acute toxicity tests shall be conducted using the test species and method identified in Part III of this permit.

- c. Part III of this permit contains an Action Level (AL) for acute Whole Effluent Toxicity for DSN 001A and DSN 002A. Toxicity Reduction and Implementation Requirements may be triggered based on exceedences of this Action Level. See Toxicity Reduction and Implementation Requirements section below for more details.
- d. Any test that does not meet the specifications of N.J.A.C. 7:18, laboratory certification regulations, must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.
- e. The permittee shall resubmit an Acute Methodology Questionnaire within 60 days of any change in laboratory.
- f. Submit an acute whole effluent toxicity test report: within twenty-five days after the end of every quarterly monitoring period beginning from the effective date of the permit (EDP). The permittee shall submit toxicity test results on appropriate forms.
- g. Test reports shall be submitted to:
 - i. New Jersey Department of Environmental Protection
Mailcode 401-02B
Division of Water Quality
Bureau of Surface Water Permitting
401 East State Street
P.O. Box 420
Trenton, New Jersey 08625-0420.

6. Toxicity Testing Requirements - Chronic Whole Effluent Toxicity - DSN 003A-DSN005A

- a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.
- b. Chronic toxicity tests shall be conducted using the test species and method identified in Part III of this permit.
- c. Any test that does not meet the specifications contained in the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Program" document must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.
- d. IC25 - Inhibition Concentration - Concentration of effluent which has an inhibitory effect on 25% of the test organisms for the monitored effect, as compared to the control (expressed as percent effluent).
- e. Test results shall be expressed as the IC25 for each test endpoint. Where a chronic toxicity testing endpoint yields IC25's from more than one test endpoint, the most sensitive endpoint will be used to evaluate effluent toxicity.
- f. Submit a Chronic Methodology Questionnaire: within 60 days from the effective date of the permit (EDP). The permittee shall resubmit after any change of laboratory occurs.
- g. Submit a chronic whole effluent toxicity test report: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP). The permittee shall submit toxicity test results on appropriate forms.
- h. Test reports shall be submitted to:

- i. New Jersey Department of Environmental Protection
Mailcode 401-02B
Division of Water Quality
Bureau of Surface Water Permitting
401 East State Street
P.O. Box 420
Trenton, New Jersey 08625-0420.

7. Toxicity Reduction Implementation Requirements (TRIR)

- a. The permittee shall initiate a tiered toxicity investigation if two out of six consecutive WET tests demonstrate that the effluent does not comply or will not comply with the toxicity limit or action level specified in Part III of this permit.
 - i. If the exceedence of the toxicity limit or action level is directly caused by a documented facility upset, or other unusual event which has been identified and appropriately remedied by the permittee, the toxicity test data collected during the event may be eliminated when determining the need for initiating a TRIR upon written Department approval.
- b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits or action levels in Part III. The monitoring frequency for toxicity testing shall be increased to monthly. Up to 12 additional tests may be required.
 - i. The permittee may return to the toxicity testing frequency specified in Part III if four consecutive toxicity tests conducted during the Toxicity Characterization do not exceed the toxicity limit or action level.
 - ii. If two out of any six consecutive, acceptable tests again exceed the toxicity limit or action level in Part III, the permittee shall repeat the Toxicity Reduction Implementation Requirements.
- c. The permittee shall initiate a preliminary toxicity identification (PTI) upon the third exceedence of the toxicity limit or action level specified in Part III during toxicity characterization.
 - i. The permittee may return to the monitoring frequency specified in PART III while conducting the PTI. If more frequent WET testing is performed during the PTI, the permittee shall submit all biomonitoring reports to the DEP and report the results for the most sensitive species on the DMR.
 - ii. As appropriate, the PTI shall include:
 - (1) treatment plant performance evaluation,
 - (2) pretreatment program information,
 - (3) evaluation of ammonia and chlorine produced oxidants levels and their effect on the toxicity of the discharge,
 - (4) evaluation of chemical use and processes at the facility, and
 - (5) an evaluation of incidental facility procedures such as floor washing, and chemical spill disposal which may contribute to effluent toxicity.
 - iii. If the permittee demonstrates that the cause of toxicity is the chlorine added for disinfection or the ammonia concentration in the effluent and the chlorine and/or ammonia concentrations are below the established water quality based effluent limitation for chlorine and/or ammonia, the permittee shall identify the procedures to be used in future toxicity tests to account for chlorine and/or ammonia toxicity in their preliminary toxicity identification report.

- iv. The permittee shall submit a Preliminary Toxicity Identification Notification within 15 months of triggering TRIR. This notification shall include a determination that the permittee intends to demonstrate compliance OR plans to initiate a CTI.
- d. The permittee must demonstrate compliance with the WET limitation or action level in four consecutive WET tests to satisfy the requirements of the Toxicity Reduction Investigation Requirements. After successful completion, the permittee may return to the WET monitoring frequency specified in PART III.
- e. The permittee shall initiate a Comprehensive Toxicity Investigation (CTI) if the PTI does not identify the cause of toxicity and a demonstration of consistent compliance with the toxicity limit or action level in Part III can not be made.
 - i. The permittee shall develop a project study plan identifying the party or parties responsible for conducting the comprehensive evaluation, establish a schedule for completing the study, and a description of the technical approach to be utilized.
 - ii. If the permittee determines that the PTI has failed to demonstrate consistent compliance with the toxicity limit or action level in Part III, a Comprehensive Toxicity Investigation Workplan must be prepared and submitted within 90 days.
 - iii. The permittee shall summarize the data collected and the actions taken in CTI Quarterly Reports. The reports shall be submitted within 30 calendar days after the end of each quarter.
 - iv. The permittee shall submit a Final CTI Report 90 calendar days after the last quarterly report. The final CTI report shall include the corrective actions identified to reduce toxicity and a schedule for implementing these corrective actions.
- f. Upon receipt of written approval from the Department of the corrective action schedule, the permittee shall implement those corrective actions consistent with that schedule.
 - i. The permittee shall satisfy the requirements of the Toxicity Reduction Implementation Requirements and return to the original toxicity monitoring frequency after corrective actions are implemented and the permittee demonstrates consistent compliance with the toxicity limit or action level in Part III in four consecutive toxicity tests.
 - ii. If the implemented corrective measures do not result in consistent compliance with the toxicity limit or action level in Part III, the permittee shall submit a plan for resuming the CTI.
 - iii. Documents regarding Toxicity Investigations shall be sent to the following:
New Jersey Department of Environmental Protection
401-02B
Division of Water Quality
Bureau of Surface Water Permitting
401 East State Street
P.O. Box 420
Trenton, New Jersey 08625-0420

F. CONDITIONS FOR MODIFICATION

1. Notification requirements

- a. The permittee may request a minor modification for a reduction in monitoring frequency for a non-limited parameter when four consecutive test results of "not detected" have occurred using the specified QL.

- b. The permittee shall notify the Department that a tag to mark the location of the outfall pipes for DSN 003A, DSN 004A, and DSN 005A have been installed consistent with N.J.A.C. 7:14A-6.2(a)9.

2. Causes for modification

- a. The Department may modify or revoke and reissue any permit to incorporate 1) any applicable effluent standard or any effluent limitation, including any effluent standards or effluent limitations to control the discharge of toxic pollutants or pollutant parameters such as acute or chronic whole effluent toxicity and chemical specific toxic parameters, 2) toxicity reduction requirements, or 3) the implementation of a TMDL or watershed management plan adopted in accordance with N.J.A.C. 7:15-7.
- b. The permittee may request a minor modification to eliminate the monitoring requirements associated with a discharge authorized by this permit when the discharge ceases due to changes at the facility.

G. Custom Requirement

1. Impingement Alternatives Analysis and Section 316(b) Determination

- a. Since the Section 316(b) final regulations are not due out until June 2013, the Department is requiring Bayway Refinery to submit an Impingement Alternatives Analysis to assess technologies to minimize impingement mortality at the Salt Water Pump Station. The purpose of this study is for Bayway to evaluate and analyze a potential alternative for reducing impingement mortality with a focus on improved screens.
- b. The Impingement Alternatives Analysis shall address the following factors at the Salt Water Pump Station:
 - i. Replacement of the existing screens with Ristroph screens having a dual spraywash system (high-and-low-pressure). The screens shall have fish lifting buckets to hold the fish in water as they are lifted to the low-pressure spraywash removal system. The screen size shall be optimized to minimize impingement mortality and the wire mesh shall have a smooth face. These screens shall be operated continuously exclusive of periods of maintenance or operational requirements.
 - ii. Installation of a fish return system for the intake structure that is designed and constructed in consideration of the following factors: 1) using a fiberglass composite or a similar non-abrasive material that will be added to the full length of the interior surface trough of the fish return; 2) a material that will reduce abrasion and obstructions to fish; 3) designed to have sufficient capacity, flow volume and water level to facilitate safe return of impinged organisms to the Arthur Kill; and 4) designed so that the fish return conveyance terminus is submerged at all tidal stages on a year-round basis.
 - iii. Inclusion of scoping cost estimates for alternatives and a project implementation schedule.

- c. The permittee shall submit the Impingement Alternatives Analysis on or before EDP + 15 months to the following address:

New Jersey Department of Environmental Protection
401-02B
Division of Water Quality
Bureau of Surface Water Permitting
401 East State Street
P.O. Box 420
Trenton, New Jersey 08625-0420.

- d. Upon receipt of the Impingement Alternatives Analysis, the Department will evaluate the findings in concert with the final EPA regulations and will reopen the permit to incorporate permit conditions pursuant to N.J.A.C. 7:14A-16.4.
- e. In consideration of the regulatory and technical information available at this time, the Department hereby determines that conduct of an Impingement Alternatives Analysis to assess the installation of modified Ristroph traveling screens as well as a fish return system at the Salt Water Pump Station constitutes best technology available based on best professional judgement in accordance with Section 316(b) of the Clean Water Act.

2. Submissions as part of any NJPDES Renewal Application-Section 316(a) Special Condition

- a. If upon renewal, the permittee wants the Section 316(a) variance to be continued, the request for the variance along with a basis for its continuance must be submitted at the time of the application for the renewal permit in accordance with 40 CFR 125.73(c). The Department's Section 316(a) Determination shall include, but not be limited to:.
- i. a review of whether the nature of the thermal discharge on the aquatic population associated with the Station have changed;.
 - ii. whether the measures required under the Special Conditions have assured the protection and propagation of a balanced indigenous population;.
 - iii. whether the best scientific methods to assess the effect of the permittee's cooling system have changed; and.
 - iv. whether the technical knowledge of stresses caused by the cooling system has changed.

3. Oil and Grease Method for DSN 001A and DSN 002A

- a. Oil & Grease is to be analyzed by the Total Petroleum Hydrocarbon (TPH) EPA Method 1664A or equivalent. The permittee shall report the TPH results under the Oil & Grease parameter on the DMRs.

4. East Side Retention Basin

- a. The East Side Retention Basin is located in a section of the refinery that includes process units. The process units that drain to the basin primarily handle butanes, propanes, butylenes and propylenes. The basin is used primarily to detain storm water, which is then pumped to the wastewater treatment plant. It is recognized that the basin's storage volume and pumping capacity are inadequate to handle very intense or heavy rainfall events.

This permit authorizes the eventual discharge from the on-site wastewater treatment plant of any waters from the East Side Retention Basin. However, this permit does not authorize the discharge of waters from the East Side Retention Basin directly to the Railroad Avenue ditch.

5. Clean Water Discharges

- a. The following discharges are authorized in this permit as they are clean in nature. Some of these discharges drain to Morses Creek and are therefore regulated at DSN 001A. Discharges are as follows:

Marine Dock Fire Fighting Water: test water to ensure system operability, maintenance, inspection, or testing

SWPS Suction Water: siphon used during pump start up and priming of pumps

SWPS Intake Wash Water: intake water used to wash off debris that collects on intake screens

SWPS Emergency Sump Pump Water: used if there was a large upset to prevent flooding in the SWPS building

SWPS Pump P-11 Condenser Water: jet condenser used to improve efficiency of the steam turbine

Marine Dock and SWPS Steam Condensate: condensate discharges from miscellaneous steam traps

Polypropylene Plant Boiler Blowdown

Polypropylene Plant Pellet Separator Water

Hydrogen Plant Condensate/Brine from Reverse Osmosis Treatment

Cooling Water Strainers at Inlet of Process Units

Morses Creek Pump Stations: for firefighting water pressure maintenance

Ponded Water: pumped from adjacent cemetery property

Potable Water: pumped to on-site reservoirs to prevent freezing of city water lines and to control levels during dry periods

Reservoir Water: water taken and returned to reservoirs for firefighting testing.

6. Temperature at DSN 001A

- a. "Temperature Difference between Intake and Discharge" as found in Part III is defined as the discharge temperature as measured at DSN 001A minus intake temperature as measured at the Arthur Kill cooling water intake. The difference is a daily average of 24 hours.

MBTU/hr means the temperature difference times the weight of water in pounds discharged in one hour. The rate is a daily average of 24 hours.

7. Use of Rhodamine WT Dye

- a. The permittee is authorized to perform periodic testing using Rhodamine WT Dye as part of dilution studies, sewer investigations, and flow meter calibrations. Use of this dye is conditional on compliance with the following requirements:
 - i. Provide written notification to the Chief, Bureau of Surface Water Permitting and the Bureau of Water Compliance and Enforcement prior to the use of Rhodamine WT dye. This notification shall include the expected dates of the discharge, the expected concentration of Rhodamine WT dye in the effluent, the expected outfall that will see the dye, and the anticipated concentration of dye to be used.
 - ii. Provide oral notice to the Bureau of Water Compliance and Enforcement at least 24 hours prior to commencing the use of Rhodamine WT dye by calling the DEP Hotline at 1-877-WARN-DEP. The NJDEP Hotline shall be notified in advance if the testing could result in dye reaching Dam #1 and the Arthur Kill. If dye is detected downstream of Dam #1, the Hotline shall (again) be immediately notified.
 - iii. Within thirty (30) days of completion of using Rhodamine WT dye, provide written notification to the Chief, Bureau of Surface Water Permitting and Bureau of Water Compliance and Enforcement. This notice shall include the actual dates of the discharge, the actual concentration of Rhodamine WT dye in the effluent, the outfall that discharged the dye, and the actual concentration of dye used.

PHILLIPS 66 CO, Linden

Permit No.NJ0001511
DSW120001 Surface Water Renewal Permit Action